90

WEALTH & WELFARE

IN THE

PROVINCE OF MADRAS

PREPARED BY

DR. B. NATARAJAN, M.A., D.LITT.,
Economic Adviser to the Government of Madras

FOR

THE RECEPTION COMMITTEE

TO

THE TENTH SESSION

OF

The All India Agricultural Economic Conference

OFFICE OF THE REGISTRAR OF BOOKS
17 MAY 950
MADRAS

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SRI B. GOPALA REDDI
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FORT ST. GEORGE
MADRAS

28th December 1949.

I commend this publication "Wealth and Welfare in the Province of Madras" prepared by Dr. B. Natarajan, M.A., D. Litt., Economic Adviser to the Government of Madras to the Delegates attending the All India Agricultural Economic Conference, Madras. It contains very useful information regarding social and economic progress made in this Province and also details regarding the administrative setup and its expenditure. It contains a chapter, No. XVI, on the Provincial finances. It gives a resume of the financial position of the Province. I am sure the Delegates will find this publication interesting and useful and appreciate it.

I congratulate Dr. B. Natarajan who has taken great pains to compile this information at a very short notice in such a presentable form.

B. Gopala Reddi

Chairman, Reception Committee

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HISTORICAL BACKGROUND

ANTIQUITY OF CIVILISATION:

The Province of Madras, extending from Cape Comorin in the South to Ganjam district of the Orissa Province in the North-east and North Canara of the Bombay Province in the North-west, lies between the Bay of Bengal and the Arabian sea and covers almost the whole of South India. It has a hoary past. The land is geologically the oldest in the Indian sub-continent. According to Professor Haeckel, it was a cradle of human civilisation. The term South India, as a distinct expression goes back to the days of the Mahabharata and that distinction it has maintained all through the historical times down to the present. * Description of the country of the Andhras, the Pundras, the Cholas, the Pandyas and the Cheras as well as the rivers, the Kaveri and the Tamravarni, are found in the Ramayana. Megasthanes has referred to the fabulous wealth, pearls and cotton fabrics of the Pandya Kingdom. The author of Arthasastra calls pearls, Tamravarnika—that which is produced in Tamravarni. This region was exporting to Rome pearls and a kind of muslim called Argaratic through its three famous ports, Kamara (identified with Kaveripatnam), Poduca (Puduvai) and Sopatna (Sopattanam). Three of the rock edicts of Asoka specifically mention the southern kingdoms and place them beyond the pale of the Mauryan Empire. The high civilisation of the people who lived here in the past had been referred to by numerous foreign writers like Strabo, Pliny, Ptolemy and in the Peryplus of the Erythraenean Sea and Pentingerian Tables. From numismatic evidence, Mr. Sewell proves that the brisk trade between South India and Rome was in luxuries under the early and in

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* Dr. S. Krishnaswamy Aiyangar: The beginning of South Indian **History.**

industrial products under the later emperors. Recent excavations at Mahenjo-Daro and Harappa have furnished archeological evidence to the great antiquity of the civilisation of South India.

THE THREE ANCIENT TAMIL KINGDOMS:

The civilisation of the three Tamil Kingdoms, which flourished in the centuries that preceded and followed the beginning of the Christian era, was the evolutionary product of several millennia. South India had remained under the hegemony of one or the other of these three kings for centuries. In the dawn of the Christian era, the Cholas became supreme under Karikala, a remarkable sovereign, who constructed the embankment of the Kavery and contributed in many ways to the permanent welfare of his subjects. His long reign together with those of his two predecessors and one successor formed the first Chola ascendancy in the South. This was followed by Chera ascendancy under Senguttuvan. In the reign of his successor, the Pandya ascendancy began and lasted till about the rise of the Pallavas. During this period, when these three dynasties successively held hegemony, South India had many flourishing cities and prosperous ports like Korkai, Kalyanapura and Mathura under the Pandyas, Woriyur, Kumbakonam and Tanjore under the Cholas and Karur, Avinashi and Thirunagari under the Cheras.

KALINGA AND VENGI:

In the centuries before the Christian era, the land lying between the Godavari and Orissa was known as Kalinga desa. To its south as far as the Krishna lay the Vengi country, forming generally a part of the Kalinga Kingdom which had its capital at Kalingapatnam, Chicacole and Rajamahendragiri at different times. Kalinga desa was ruled successively by the Mauryas, the Andhras, the Pallavas, the Eastern Chalukyas and the Ganapathis of Warangal.

THE MIDDLE AGES:

The emergence of new dynasties in the Deccan had its repercussions on the political fortunes of South India. The Chalukyas, already a growing power in the Deccan, conquered and brought not only the Deccan dynasties under their suzerainty but also exerted their power over the Cholas and Pandyas in the fourth and fifth centuries. After the rise of the Pallavas, there was continuous struggle for supremacy between them and the Chalukyas. After the great Pallavas, Mahendravarman and Narasimhavarman, the Pallava power began to decline. At the end of the 11th century, the whole of the modern Madras Province was ruled by several dynasties like the Kalingas, Chalukyas, Cholas and Pandyas. In the two centuries that followed, the Imperial Cholas gained paramountcy over South India and also engaged themselves in maritime adventures. Under Raja Raja the Great and Rajendra Chola, this maritime enterprise led to commerce, conquest and colonisation of lands as far beyond as Sumatra and Java to the east, Ceylon to the south east and the Maldive and Laccadive islands to the west. Later the Cholas lost their northern territories to Gajapathis of Warrangal, who were in their turn pressed hard by the Hoysalas. In this period when South India was torn by internecine warfare and rivalry, the Moslem invaders broke into the scene. The first of the Moslem inroads was made by Alauddin Khilji who was followed by his general, Malik Kafur. The Moslem incursions gradually strengthened and finally led to the establishment of the Bahmani Sultanate by the middle of the 14th century. At the same time, the Kingdom of Vijayanagar had been founded to stem the tide of Moslem invasion. The Rayas of Vijayanagar quickly consolidated their power over the whole of South India. By 1487, the Chola dominions had been absorbed by the Rayas and at the close of the century, Vijayanagar became the supreme power in the South. The reign of Krishna Deva Raya was the golden age in the history of this dynasty.

The mighty empire of the Rayas however came to a sudden end when at the Battle of Talikota in 1564, the confederate forces of the Deccan Sultans completely vanquished the Raya and systematically carried out the destruction of the magnificient city. The scions of the dynasty fled to distant places like Chandragiri. The whole country was split up into fragments each ruled by petty rulers called Naiks of whom the Naiks of Mathurai were the prominent.

The fall of Vijayanagar left the country bleeding and prostrate. The Moslem powers seized this opportunity to cross the Tungabhadra and the Krishna and extend their sway. The Moslem rule continued right down to the end of 18th century when this part of the country came under the rule of the East India Company.

THE ENGLISH EAST INDIA COMPANY IN SOUTH INDIA:

Even during the period of the tumultuous confusion that followed the Battle of Talikota, European commercial interests had appeared as rivals in the arena of South India. The Portuguese, the Dutch, the French and the English came in quack succession and established trading centres, known as factories. It was in 1611 that the English East India Company secured permission from the Sultan of Golconda to build a factory at Masulipatam, the rich emporium of the Sultanate. In 1626 they obtained the grant of a small piece of land at Armagaon and erected a factory. Both the factories, proving to be unsatisfactory from the business point of view, Francis Day, a factor of the Company, after some search, finally selected a site, north of the mouth of the Cooum and got a charter from the ruler of Chandragiri to build a factory there. On the 23rd April 1640, the innerpart of the Fort St. George was finished but only in 1641, it became the headquarters of the Company on the Coromandel Coast superceding

Masulipatam. The new settlement that grew up rapidly was named after the father of the Nayak ruler of Chandragiri as Chennapatnam. In 1681, the Mahratta ruler at Gingee permitted the English to build factories at Porto Novo, Cuddalore and Konimedu. A factory was established at Visakhapatnam in 1682; and two more at Tellicherry (1683) and Angengo (1694) respectively in the west coast. In 1690, the Fort St. David was built near Cuddalore.

MADRAS CORPORATION:

The population of Madraspatnam rose to 40,000 by 1670 and in 1676, the village of Triplicane was obtained from the agent of the Sultan of Golkonda; on the 30th December 1687, the Corporation of Madras, the earliest of its kind, was formed. Three more villages in 1693 and five more in 1727 including Nungambakkam and Vyasarpadi were secured. The Madras Corporation was reorganised under a Charter from the Crown in 1727 which was renewed in 1753.

THE CARNATIC WARS:

In the early decades of the 18th century, the English Company had their chief factory at Madras, the Dutch at Nagapattinam and the French at Pondicherry in the Carnatic. Every conflict between France and England in the Continent had its repercussions in South India. To the Anglo-French Wars of this period in the Carnatic, the death of the Nizam and the Carnatic Nawab and the consequent succession disputes offered excellent fuel. The foreign powers took up the role of allies of the rival claimants to the vacant thrones. The whole of the Carnatic, Circars and the Hyderabad territory became a cockpit of local potentates aided by interested foreigners. At the end of the first bout, the English for their labours got the districts immediately surrounding Madras as reward from the Nawab of the Carnatic.

In 1765, the English occupied Guntur, Mostafanagar, Eluru, Rajahmundry and Chicacole, otherwise known as the Circars. In

1771, they deposed the Raja of Tanjore. Madura was occupied in 1773 and the polygars of Ramnad and Sivaganga were reduced and all these territories were annexed to the possession of the Nawab of the Carnatic, the *roi faineant* in whose name they carried on their campaigns of war and conquest.

THE MYSORE WARS:

The change in the balance of political power in South India raising the English to the status of a major power had come over by the time the First Mysore War broke out. In this war, Hyder Ali dictated terms of peace under the walls of Madras and the English had to submit to them. The Second Mysore War ended with better prestige but without much territorial gains to the English. At the end of the Third Mysore War, Tippu Sultan was forced by the treaty of Seringapatam to cede half of his dominions and the English obtained Malabar, Coorg, Dindigul with the surrounding districts and Baramahal. When Tippu Sultan died fighting during the Fourth Mysore War, the English annexed Canara, Coimbatore, Wynaad and Dharapuram to their territories.

SUBSIDIARY ALLIANCE AND TERRITORIAL GAINS:

In 1799, under the terms of the Subsidiary treaty, the Raja of Tanjore gave up the administration of his state to the English in return for an annuity of £40,000. When the subsidiary alliance with the Nizam originally made in 1798 was revised in 1800, he ceded to the English the districts of Bellary, Anantapur, Kurnool and Cuddapah in lieu of the annual subsidy for the upkeep of the English forces. The death of the Carnatic Nawab, in 1801, gave the English an opportunity to become the dejure as well as de facto rulers of the Carnatic. The successor to the Musnad was paid one-fifth of the revenue and allowed to retain the title but the Company took over the civil and military administration of the Carnatic. This new Nawab of the Carnatic died when Dalhousie was the Governor-

General. He refused to recognise any successor. However the British Government conferred on the claimant to the Nawabship the title of the Prince of Arcot, the premier nobleman of the Province, and pensioned him. Thus by the beginning of the 19th century the Presidency of Madras had been completely formed.

THE THREE PRESIDENCIES:

In the early days of the Company's rule, the Indian factories were grouped under three independent presidencies, each governed by a President and Governor with the aid of a Council. These were the original Presidencies of Fort St. George, of Fort William of Bengal and of Bombay. As Madras was the earliest to acquire territorial importance, the practice of appointing the Governor from England appeared even before it did in Bengal. A distinction between the Regulation Provinces called the Presidencies, administered by Governors-in-Council and the non-Regulation Provinces like the Punjab, Assam, etc., administered by the Lieutenant-Governors was maintained until it was abolished by the Reforms Act of 1919. All the Provinces thus became Governors' Provinces, each having at its head a Governor appointed by the Crown.

CHANGES IN THE MAP OF THE MADRAS PRESIDENCY:

For the purpose of revenue administration, the Presidency was originally divided into 21 districts including the City of Madras. At different times, for administrative and other reasons, some of the districts were transferred to the adjacent provinces and some too heavy for a single district officer, were reduced in size. North and South Canara formed one district under the Madras Government prior to the year 1860, when they were separated into the above-named two divisions. This separation was followed by the transfer of North Canara, with the exception of the Coondapoor taluk to the Presidency of Bombay on account of its close connection with the latter. The district of Ganjam was transferred on account of its

linguistic affinity to the newly formed separate Province of Orissa when the Constitution of India Act, 1935 was implemented.

Other changes effected in the size and number of the districts had the object of improving administrative facilities, which would benefit the people of the district as well as the officials of the Government. On 5th January 1882, the district of Anantapur was formed out of the district of Bellary. On the 1st October 1910, the taluk of Kadiri was transferred from the district of Cuddapah to the district of Anantapur. The three districts of Krishna, Nellore and Godavari were reconstituted into four districts of Krishna, Nellore, Godavari and Guntur on the 1st October 1904. The district of Ramnad was formed out of the districts of Mathurai and Tirunelveli on the 1st June 1910. The taluk of Karur was transferred from the district of Coimbatore to the district of Tiruchirapalli on the 15th November 1910. The district of North Arcot with the taluks of Madanapalle and Vayalpad of the Cuddapah district, the taluk of Tirupattur of the Salem district, the taluk of Tiruvannamalai of South Arcot district was constituted into two districts of Chittoor and North Arcot on the 1st April 1911. Two districts of West Godavari and Krishna were made out of the Krishna on 15th April 1925, the existing district of Godavari being renamed East Godavari. The two taluks of Anjengo and Tangasseri were transferred from the district of Malabar to the district of Tirunelveli on the 1st July 1927. The district of Visakhapatnam, the largest in India, was divided into two districts of North and South Visakhapatnam in 1949. In addition to the formation of new districts out of the old, there had also been several instances of redistribution of taluks and divisoins of the district †. At present, the Province of Madras has 26 districts including the city of Madras, and the former Indian States of Pudukottai, Banganapalle and Sandur which have been merged with it in pursuance of the policy of integration.

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† For details vide G. T. Boag: The Madras Presidency 1881-1931, pp 9-11

I. POPULATION, LEGISLATURE AND LOCAL ADMINISTRATION

The total area of the Madras Province is 1,26,166 square miles according to professional survey as shown in the Central Survey Office, Madras; and 79,933,806 acres according to the Annual Season and Crop Report which represents the added up totals of areas of fields.

POPULATION

The population of the Province has risen from 33.732 millions in 1891 to 49.842 millions in 1941 or by 45.936 per cent.

Date.	Population.	Density per Sq. Mile.
1891	33,732,664	267
1901	36,258,955	287
1911	39,129,111	310
1921	40,126,512	318
1931	44,205,243	350
1941	49,841,810	391

Density of Population.

The present density of population of 391 per square mile in the Province is higher than in Bombay, C.P., Assam, Orissa and East Punjab but lower than in U.P., Bihar and West Bengal. In other words, this Province is more densely populated than any other part of India except the Gangetic basin. Its density is also higher than that of France, Italy, Spain, Portugal, Roumania and Bulgaria. Density of population in the various Provinces of the Indian Union (1941 Census) and that in some European Countries are given below for comparison.

Province.	Density.	Countries of Europe.	Density.
Madras	427	England	750
Bombay	304	France	190
Central Provinces	185	Italy	343
United Provinces	561	Belgium	714
Bihar	564	Spain	139
Assam	201	Portugal	240
Orissa	294	Roumania	179
East Punjab	320	Bulgaria	164
West Bengal	718	Germany (Military occupied)	481

Density in different districts.

The Province is divided into 24 revenue districts excluding the Madras City. Their area, population, density and number of houses are given below:—

*Statement showing Area, Population, Density and Number of Houses in the various Districts of the Province.**

District	Area	Population	Density	No. of Houses	Persons per House
Visakhapatnam	9,107	3,845,944	422.3	819,932	4.7
East Godavari	6,322	2,161,863	342.0	429,727	5.0
West Godavari	2,434	1,380,088	567.0	272,547	5.1
Krishna	3,469	1,444,294	416.3	297,246	4.9
Guntur	5,795	2,277,283	393.0	473,795	4.8
Nellore	7,942	1,617,026	203.6	334,190	4.8
Cuddapah	5,923	1,056,507	178.4	214,052	4.9
Kurnool	7,634	1,146,250	150.2	229,646	5.0
Bellary	5,714	1,051,235	184.0	212,652	4.9
Anantapur	6,734	1,171,419	174.0	238,880	4.9
Madras	30	777,481	25916.0	87,888	8.8
Chingleput	3,074	1,823,955	593.3	322,476	5.7
Chittoor	5,951	1,632,395	274.3	301,233	5.4
North Arcot	4,671	2,577,540	551.8	409,052	6.3
Salem	7,073	2,869,226	405.7	587,674	4.9
Coimbatore	7,121	2,809,648	394.6	555.979	5.1
South Arcot	4,205	2,608,753	620.4	484,076	5.4
Tanjore	3,738	2,563,375	685.8	536,890	4.8
Tiruchirapalli	4,329	2,194,091	506.8	452,101	4.9
Mathurai	4,883	2,446,601	501.0	456,162	5.4
Ramnad	4,851	1,979,643	408.1	403,366	4.9
Tirunelveli	4,342	2,244,543	516.9	505,431	4.4
Nilgiris	989	209,709	212.0	47,457	4.4
Malabar	5,790	3,929,425	678.7	699,114	5.6
South Kanara	4,045	1,523,516	376.6	265,226	5.7

* Based on 1941 Census of Population.

Former States (now merged in the Province).

Pudukottai	1,185	438,348	369.9	90,004	4.9
Banganapalle	259	44,592	172.2	8,903	5.0
Sandur	158	15,814	100.1	3,277	4.8

According to religions

The most important religions of the Province are Hinduism, Islam and Christianity. The population of the Province may be divided on the basis of religions as follows:—

Religion	Population (in thousands)	Percentage to total population
Hindus	43,247	86.77
Muslims	3,927	7.88
Christians	2,068	4.15
Others	599	1.20
Total ...	49,841	100.00

According to languages.

The population of the Province speak mainly four languages and may be divided on the linguistic basis as follows:—

Language	Population (in thousands)	Percentage of total population
Tamil	19,957	40.04
Telugu	18,780	37.68
Malayalam	3,937	7.90
Canarese	1,779	3.57
Others	5,388	10.81
Total ...	49,841	100.00

FRANCHISE.

The two houses of the Provincial Legislature have been elected on the basis of the Constitution of India Act, 1935. The qualifications for voters for the several constituencies of the two chambers are set out in (i) the sixth schedule of the Government of India Act, 1935, (ii) the Government of India (Provincial Legislative Assemblies) Order 1936, Part I and III and (iii) the Government of India (Provincial Legislative Councils) Order 1936, Parts 1 and II.

Under the Government of India Act, 1935, the franchise was enjoyed by 8,541,799 or 17.30 per cent of the population based on property and other qualifications. Registered landholders, tenants, mortgagees with possession and lessees have right of vote. Other qualifications for franchise included assessment to income tax, payment of certain taxes such as motor vehicles tax, property tax, house tax and profession tax, literacy or sole tenancy; franchise is granted to retired, pensioned or discharged members of His Majesty's Naval, Military or Air Forces. Generally speaking, persons paying taxes are entitled to enrolment without application while other classes such as literates and tenants with fixity of tenure have to apply for enrolment.

LEGISLATIVE COUNCIL.

Candidates for the Upper House of the Provincial Legislature, called Legislative Council, must be not less than 30 years. The general qualifications for membership applicable to members of both Houses of the Legislature are the following:—(1) The person must be a British subject or the ruler or subject of an Indian State which has acceded to the Federation of the ruler or subject of any prescribed Indian State, (2) A person cannot be a member of both the Houses.

Conviction and sentence either of transportation or imprisonment for not less than two years, and holding of any office of profit under the Crown are disqualifications.

The franchise for the Legislative Council is based on high property qualifications. The voter must be a holder of an estate with an annual income of not less than Rs. 1,500 or a registered inamdar, ryotwari pattadar or occupancy ryot under the Madras Estates Land Act, 1908 in respect of land with an annual rented value of not less than Rs. 300 or a person in receipt from Government a malikhana allowance of not less than Rs. 500 per annum or pensioners of not less than Rs. 200 per month. A person assessed to income tax has also the right to vote. Other qualifications include service in certain distinguished offices such as High Court Judge, Minister, Member of an Executive Council, Chancellor, Pro-Chancellor, Vice-Chancellor, Fellow, Member of the Senate or Council of any University, Mayor, or Sheriff of Madras, non-official member of any legislature, non-official president of a district board, or non-official chairman of any municipal council or the non-official president of any Co-operative Central Bank. recipients of certain titles or awards of pension, Civil, Military or political of not less than Rs. 250 per month.

There are at present 55 members of whom 45 are elected by territorial constituencies and 10 nominated by Government to represent various interests for periods varying from 3 to 9 years.

Legislative Assembly.

Candidates for the Lower House must not be less than 25 years. The Lower House consists of 212 members of whom 6 represent bigger landholders, 6 Chambers of Commerce, Industry and Planting, 1 University, 6 Labour and 8 Women. Separate electorates for Moslems Anglo-Indians, Moslem and Christian Women were in vogue at the

time of the election. The Lower House of the Legislature called the Legislative Assembly, has 212 elected members and 2 nominated members of Banganapalle and Pudukottah.

Composition of the Legislature Parties as on 31st March 1949.

	Council	Assembly
Congress	35	166
Moslem League	5	21
United People's Party	—	16
Europeans	—	3
Communists	—	2
Independents (unattached)	5	4
United Democrats	9	—
Vacant	1	—
	55	212

LOCAL ADMINISTRATION

There are 24 District Boards, 94 Municipalities excluding the Corporation of Madras, 416 major panchayats and 7,192 minor panchayats. Their revenues, population and average per capita incidence of the revenues (1947-48) are shown below:—

Description	No.	Population * in millions	Revenue in (lakhs of Rs.)	Per capita burden of revenues in RS.	A.	P.
Madras City	1	1.500	155.79	10	6	2
Municipalities	81	3.914	560.39	14	5	1
District Boards	24	47.976	805.38	1	10	10
Major Panchayats	397	3.975	121.06	3	0	9
Minor Panchayats	6,951	6.710	64.10	0	15	8

* Estimated for the year 1947-48 on the basis of 1941 Census.

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II. AGRICULTURE

LAND

Classification of Area.

The classification of area under forests, net area sown, current fallows, other uncultivated lands and land not available for cultivation is shown in the statement given below:—

Classification of Area.

Description	Area in Acres	Percentage to total area
Forests	13,496,668	16.9
Net area sown	31,035,475	38.8
Currrent fallows	9,498,721	11.9
Other uncultivated lands	11,848,904	14.8
Not available for cultivation	14,054,038	17.6
Total ...	79,933,806	100.0

The cultivable waste together with fallows in this Province is 21,347,625 acres.

Classification of Land Under Various Systems of Tenure.

Prior to the abolition of Zamindaris and whole inams, the area under ryotwari settlement including minors inams was 75,604.94 sq. miles or 48,387,161.60 acres, whole inam 7,415.77 sq. miles or 4,746,092.80 acres, Zamindaris 25,661.29 sq. miles or 16,423,225.60 acres and the area under reserved forests and hills was 17,146.95 sq. miles or 10,974,048.00 acres. *

* Report on the Settlement of Land Revenue 1945-46 (for Fasli 1355).

The small difference noticed between the total of 80,530,528 acres in this section and the total of 75,933,806 acres in the previous section is due to the fact that the former is according to professional survey and that the latter is the added up totals of areas of fields.

Distribution of Agricultural Population.

A statement showing the distribution of the agricultural population in the Madras Province according to different categories is given below: —

Category	Population	Percentage to total Population
1. Estimated agricultural population cultivating their own lands ...	20,601,120	57
2. Estimated agricultural population which has leased out lands ...	5,059,928	14
3. Estimated population of tenants who having no lands of their own, cultivate lands of others.	5,059,926	14
4. Estimated agricultural population of small holders who cultivate lands of others ...	5,421,349	15
Total estimated Agricultural Population in the Madras Province ...	36,142,332	100

The figures are based on the results of a survey of about 20 villages in each taluk.

It may be seen from the above statement that landless labourers in this Province form only 14 per cent of the agricultural population.

Distribution of Land according to Assessment.

Apart from the low percentage of the landless population, this Province shows the widest distribution of land among the rural population. Statistics relating to the assessment and the number of pattas

in the ryotwari area show that the total area cultivated under ryotwari system is of the order of 27.661 million acres and the assessment was Rs. 604.51 lakhs, paid by 4,012,341 single pattas and 7,189,106 pattas—single and joint together. On the basis of assessment, distribution of pattas is shown below:—

Statement showing the number of pattas of various values during Fasli 1355 (1945-46).*

Pattas on which the payment is	Pattas. Single Number	Single % to total	Joint. Number	Joint. % to total	Total.
One rupee and less	825,502	20.57	810,456	25.51	1,635,958
Rupees ten and less but over one rupee	2,297,093	57.25	1,673,000	52.66	3,970093
Rupees fifty and less but over Rs. 10	763,919	19.04	621,901	19.58	1,385,820
Rupees hundred and less but over Rs. 50	83,228	2.07	53,931	1.70	137,159
Rupees 250 and less but over Rs. 100	31,918	0.80	13,832	0.44	45,750
Rupees 500 and less but over Rs. 250	7,023	0.18	2,372	0.07	9,395
Rupees 1,000 and less but over Rs. 500	2,305	0.06	738	0.02	3,043
Over Rs. 1,000	1,353	0.03	535	0.02	1,888
Total	4,012,341	100.00	3,176,765	100.00	7,189,106

More than 50 per cent of the single as well as joint pattas pay an assessment between Re. 1 and Rs. 10. The number of single pattas paying an assessment of more than Rs. 1,000 is only 1,353 or 0.03 per

* Report on the Settlement of Land Revenue, 1945-46 (for Fasli 1355).

cent of the total. The total number of agricultural families in the Province is estimated at 7,228,466; and in the old ryotwari areas it is about 5 millions of whom more than 4 millions are pattadars or land-holders, even when no account is taken of the 3.176 million joint pattas. A more or less similar pattern of distribution has manifested itself in the erstwhile Zamindari areas where, after the abolition of the Zamindaris, the occupancy tenants have become ryots.

The majority of the pattadars pay an assessment of less than Rs. 10 per annum and are petty landholders owning uneconomic dwarf holdings. The Province of Madras has in fact a large class, that may properly be called a peasantry, people who work themselves on the land they own or rent and live by the sale of their own produce.

Area under Food Crops.

The area under the staple cereals of the Province, paddy and millets, was fairly constant at 23 million acres between 1938-39 and 1942-43. It rose to 24.129 million acres in 1943-44; since then it has gradually declined to 21.759 million acres in 1947-48 and to 21.535 million acres in 1948-49 (Estimated). The area under pulses rose from 2.425 million acres in 1938-39 to 3.109 million acres in 1943-44, but later dropped to 2.724 million acres in 1947-48. The area under other food crops has mildly risen from 1.506 million acres in 1938-39 to 1.602 million acres in 1947-48. The total area under food crops has declined from 26,941,736 acres to 26,137,154 acres in this decade or by 804,582 acres.

Area under Commercial Crops.

The principal commercial crops of this Province are groundnut, cotton, sugarcane, gingelly, cocoanut, tobacco and castor, arranged in a descending order of importance with reference to area. Of these, groundnut, sugarcane and cocoanut have registered an increase in area in the past 10 years; the area under groundnut has risen from 3.770 million acres to 4.067 million acres or by 7.87 per cent, the area

under sugarcane from 98,262 acres to 272,680 acres or by 177.41 per cent and cocoanut from 585,124 acres to 615,983 acres or by 5.27 per cent. The area under gingelly, tobacco and castor has decreased in this period, the area under gingelly from 876,397 acres to 638,367 acres or by 27.92 per cent, the area under tobacco from 320,134 acres to 293,759 acres or by 8.56 per cent and the area under castor from 267,627 acres to 240,823 acres or by 10.10 per cent. Taken together, the total area under all these commercial crops has registered a fall from 7.487 million acres to 7.426 million acres or by 0.421 million acres or 5.37 per cent.

The total area under food and commercial crops has fallen from 34,788,983 acres to 33,562,245 acres or by 1,226,738 acres or by 2.96 per cent. This decline in area is not a permanent feature of the provincial agricultural economy. The year 1947-48 to which the statistics refer experienced adverse seasonal conditions, the weighted average seasonal factor for the year being only 84.

Statement of area under principal crops in 1938-39 *and* 1947-48.

Description of the Crop.	Area in acres.) 1938—39	**Area in acres. 1947—48**	Difference increase + Decrease −	**Percentage fall or rise.**
Food Crops:				
Paddy	9,844,388	10,434 149	+589,761	+5.99
Millets	13,165,372	11,325,258	−1,840,114	−13.08
Pulses	2,425.685	2,775,623	+349,938	+14.42
Other Food Crops	1,506,289	1,601,126	+95,837	+6.36
Total ..	26,941,734	26,136,156	−804,578	−2.99
Commercial Crops:				
Groundnut	3,770,689	4,066,830	+296,141	+7.85
Cotton	1,928,714	1,297,647	−631,067	—32.72
Sugarcane	98.262	272,780	+164,418	+177.49
Gingelly	876,397	638,367	−238,030	−27.17
Cocoanut	585.424	615,983	+30,559	+5.21
Tobacco	320,134	293 759	−26.375	−8 24
Castor	267,627	240,823	−26,804	−10.03
Total ..	7,847,247	7,426,089	**—421,158**	**−5.37**
Total of food and commercial crops ..	**34,788,981**	**33,562,245**	**−1,225,736**	**−3.53**

The area and yield of food and commercial crops in the province are tabulated below:—

Area and Yield of Food Crops, Cash Crops and Others for 1947–48.

Crop.	Area.	% to total	Yield in (tons)	Normal yield per acre. (lb)	Yield per acre 1947—48 (lb)
Paddy	10,434,149	30.13	6,462,150	1,549	1,271
Cholam	4,211,008	12.16	946,310	1,022	715
Cumbu	2,238,989	6.46	480,800	879	652
Ragi	1,481,591	4.28	582,370	1,105	851
Korra	1,563,860	4.51	231,620	394	332
Varagu	888,923	2.57	223,650	841	564
Samai	438,683	1.27	60,570	441	309
Maize	47,341	0.14	20,250	1,058	958
Wheat	8,796	0.02	1,020	N. A.	224
Barley	1,290	0.04	410	N. A.	672
Red Gram	337,464	0.97	41,450	336	275
Black Gram	291,125	0.84	32 260	303	248
Green Gram	461,071	1.33	40,720	238	198
Bengal Gram	84,262	0.24	16,480	N. A.	436
Horse Gram	1,368,770	3.95	95,650	,,	157
Onions	52,205	0.15	213,860	1,130	909
Potatoes	15,516	0.04	46,530	N. A.	6,496
Sweet Potatoes	33,660	0.10	136,800	,,	9,224
Mangoes	231,000	0.67	724,630	,,	6,944
Plantains	168,654	0.49	231,520	,,	16,352
Tapioca	32,954	0.10	94 410	,,	6,272
Sugarcane	272,680	0.79	753,500	6,886	6,189
Groundnut	4,066,830	11.74	1,600,970	N. A.	882
Cotton	1,297,647	3.75	266 093+	182	156
Castor	240,823	0.70	20,060	220	187
Gingelly	638,367	1.84	72,050	303	253
Tobacco	293,759	0.85	107,230	992	818
Indigo	22,867	0.07	4,430cwt	N. A.	22
Tea*	82,000	0.24	23,614	,,	727
Coffee	85,644	0.25	9,670	,,	226
Pepper	97,755	0.28	8,070	,,	179
Cocoanut	615,983	1.78	154,0[illegible]0	,,	448

Crop.	Area.	% to total.	Yield in (tons).	Normal yield per acre.	Yield per acre 1947—48
Chillies	365,256	1.05	148 170	1,130	909
Ginger	10,315	0.03	3,160	N. A.	672
Others	2,151,493	6.21	N. A.	N. A.	N. A.
Total	34,632,730	100.00	...	..	...

* Figures are for 1945—46 from Government of India Publication, *Estimates of area and yield of principal crops in India*.

‡ bales of 400 lb. lint. N. A. = Not available.

Value of Agricultural Produce :

The aggregate value of agricultural produce of all important crops of this Province in 1948-49 amounted to Rs. 519.9857 crores, of which foodgrains accounted for Rs. 239.29 crores, pulses for Rs. 11.14 crores, commercial crops for Rs. 145.82 crores and coffee for Rs. 1.64 crores. A statement showing the yield and value of the principal agricultural produce is given below:—

Statement showing the value of Agricultural Commodities produced in 1948—49.

Name of Commodity	Production in tons	Price per ton in Rs.	Value of Production in Rs.
Paddy	7,263,470	232.46	1.688,466,236
Cholam	1,149,970	224.29	257,926,771
Cumbu	616,360	228.38	140,764,297
Ragi	760,550	217.22	165,206,671
Korra	206,760	197.07	40,746,193
Varagu	314,280	177.47	55,775,272
Samai	97,400	192.99	18,797,226
Maize	24,510	247.97	6,077,745
Wheat	1,770	461.65	817,121
Bengalgram	12,190	574.61	7,004,496
Horsegram	115,370	325.28	37,527,554
Greengram	44,900	481.79	21,632,371
Redgram	39,260	481.52	18,004 475
Blackgram	34,340	524.26	18,003,088
Chillies	148,020	1,558.35	230,666,967
Onions	219,870	182.92	40,218,620
Potatoes	55,000	371.28	20,420,400

Name of Commodity.	Production in tons.	Price per ton in Rs.	Value of production in Rs.
Sugarcane	407,470	342.70	139,639,969
Groundnut	1,619,450	410.75	665,189,088
Gingelly	84,950	706.63	60,028,219
Castor	24,250	505.75	12,264,438
Tobacco	113,430	1,951.95	221,519,689
Cotton	88,612	1,778.59	147,857,097
Ginger	4,050	1,523.20	6,168,960
Pepper	9,740	3,234.82	31,507,147
Other Cereals	93,740	195.84	18,358,042
Other pulses	17,390	477.49	8,303,042
Fruits & Vegetables	798,042 *	300.00 †	239,412,600
Arecanuts	7,479,995 (a)	20.00 (d) ‡	149,599,900
Betal vines	1,242,240 (b)	241.66 (c)	300,199,718
Cocoanuts	154,000	1,374.61	211,689,940
Coffee	3,851	4,245.50	16,349,421
Tea	25,800	4,760.23	122,813,234
TOTAL			5,199,857,216

* Denotes acreage
(a) in thousands
(b) Lakhs of leaves

† Value per acre
‡ Price per 1000 nuts
(c) Price per lakh of leaves

TREND OF AGRICULTURAL PRICES.

Statistics of average retail prices are available for paddy, cholam and ragi for nearly a century and a half. In the last 150 years, their prices have risen nine fold. All through the decades there has been a general uniformity in the trend of prices of these three grains. In the first half of the 19th century the prices had been gradually on the decline. The price of paddy per imperial maund dropped from Rs. 1-2-5 in 1801-02 to Re. 0-12-9 in 1850-51, that of cholam from Re. 1-1-3 to Re. 0-12-4 and that of ragi from Rs. 1-1-1 to Re. 0-10-10. In the second half of the century the prices fluctuated

severely, yet maintained a long term uptrend. In 1900-01 the price of paddy was Rs. 2-10-3, of cholam Rs. 2-13-0 and of ragi Rs. 2-10-10. The index number of prices (base 1913-14=100) of Paddy was 34 in 1801-02, 24 in the mid-year of the century and 79 in 1900-01. The corresponding numbers were 35, 25 and 91 for cholam and 37, 23 and 91 for ragi. On the eve of the World War I, the price of paddy was Rs. 3-5-5, of cholam Rs. 3-1-3 and of ragi Rs. 2-14-10. The immediate post-war boom saw their prices at peak levels, Rs. 5-1-11 for paddy, Rs. 5-5-9 for cholam and Rs. 5-1-5 for ragi. Since then, the prices had been declining until they reached the lowest points in the trough of the world-wide depression. The index numbers of paddy fell by 77 points, of cholam and cumbu by 85 between the years 1920-21 and 1935-36.

With the outbreak of the second World War and the Japanese occupation of the far-east, prices of all foodgrains have recorded steep rise. In spite of controls, prices rose nearly 3 times by the end of the War. In the decontrol period, they reached the zenith. Between July 1948 and December 1948 when the full effects of decontrol were experienced the price of paddy stood at Rs. 13-13-7, of cholam at Rs. 14-3-4 and of ragi at Rs. 14-9-11, the index numbers being 413, 461 and 499 respectively. Re-imposition of controls began to curb price rise and in October 1949 prices have dropped to round about Rs. 10 per maund for the three kinds and the index numbers had fallen to 304 for paddy, 308 for cholam and 338 for ragi.

Prices of these three grains with their index numbers in the last 150 years are summarised below:—

Statement showing the Presidency average retail prices of Paddy, Cholam and Ragi (Price per Imp. Md. of 82-2/7 lb.)

Year.	Paddy. Price. Rs. a. p.	Paddy. Index No.	Cholam Price. Rs. a. p.	Cholam Index No.	Ragi. Price. Rs. a. p.	Ragi. Index No.
1801—02	1 2 5	34	1 1 3	35	1 1 1	37
1810—11	0 15 4	29	0 13 11	28	0 13 3	28
1820—21	0 15 4	29	1 1 5	35	0 15 4	33
1830—31	0 14 10	28	0 12 7	26	0 12 9	27

Year.	Paddy. Price Rs. a. p.	Paddy. Index No.	Cholam. Price Rs. a. p.	Cholam. Index No.	Ragi. Price Rs. a. p.	Ragi. Index No.
1840—41	0 15 10	30	0 12 7	26	0 12 9	26
1850—51	0 12 9	24	0 12 4	25	0 10 10	23
1860—61	1 9 7	48	1 6 10	46	1 7 6	50
1870—71	1 10 5	49	1 8 2	49	1 6 9	48
1880—81	1 10 0	49	1 5 5	44	1 6 1	47
1890—91	2 0 2	60	1 12 4	57	1 10 1	91
1900—01	2 10 3	79	2 13 0	91	2 10 10	91
1905—06	2 10 3	79	2 9 7	84	2 8 8	87
1910-11	2 10 9	80	2 12 6	90	2 9 0	87
1913—14	3 5 7	100	3 1 3	100	2 14 10	100
1915—16	3 1 11	93	2 11 10	89	2 10 9	91
1920—21	5 1 11	153	5 5 9	174	5 1 5	174
1925—26	4 8 6	140	4 4 10	140	4 3 0	143
1930—31	2 15 8	89	2 10 9	87	2 10 3	90
1935—36	2 8 8	76	2 11 10	89	2 9 11	89
1940—41	2 15 10	89	2 12 2	90	2 11 6	93
1941—42	3 8 10	106	3 2 1	102	2 15 4	101
1942—43	4 2 9	154	5 8 2	179	5 5 1	182
1943—44	6 6 3	191	8 2 1	264	7 10 5	261
1944—45	6 3 10	186	7 3 4	234	7 7 0	254
1945—46	6 9 5	197	7 3 10	235	7 9 1	258
1946—47	6 15 4	208	7 10 3	248	7 12 2	265
1947—48	9 3 10	276	9 11 0	315	9 9 7	328
December 48*	13 13 7	413	14 3 4	461	14 9 11	499
June 1949	10 5 3	308	10 4 8	334	10 6 1	354
July 1949	10 2 1	302	10 1 7	328	9 15 10	341
August 1949	10 3 6	305	10 2 1	329	10 1 3	344
September 1949	10 3 8	305	10 1 1	327	9 15 10	341
October 1949	10 3 2	304	9 7 10	308	9 14 7	338

* Result of decontrol.

FOOD PROBLEM.

A DEFICIT PROVINCE.

The records of the East India Company show that this Province has been deficit in food supply for over a century and a half. In the three decades from 1796-97 to 1828-29, foodgrains had been regularly imported "from the several ports of Bengal to the several ports and places on the Coromandel Coast".*

Statement showing imports of foodgrains from ***Bengal.***

Period	Imports in maunds.
1796-97—1805-06	18,23,368
1806-07—1815-16	19,60,059
1816-17—1825-26	7,89,828
1826-27—1828-29	39,364

After the British annexation of Arakan and Tennaserrim in 1826 and their subsequent economic development, Burma began to displace Bengal as an exporter of rice. Towards the turn of the century, imports from Siam also began to flow into this Province. The volume of such imports from Burma and Siam in the period from 1857-58 to 1937-38 may be seen from the following statement.

Imports of Paddy and Rice (in terms of rice) into the Madras Province from Burma and Siam.

Year	Imports (Tons)
1857-58	1,868
1869-70	22,707
1877-78	31,427
1887-88	9,546
1897-98	89,635

* Report of the Select Committee of the House of Commons, 1832, Appendix No. 109.

1907-08	121,240
1917-18	96,708
1927-28	410,039
1937-38	701,491

In the past 10 years, the problem of foodgrains supply in this Province had taken a serious turn, particularly after the loss of imports from Burma and the Far East, consequent upon the Japanese occupation of these territories. The food position in these years is shown below: —

Internal Production, Imports, Total Supply and Total Requirements of Foodgrains in the Province of Madras.

Year.	Population. (000)	Production (Tons). (000)	Net Imports (Tons). (000)	Total. Tons.) (000)	Total Requirements at 16 oz.	Ration per day per adult in oz. on the basis of availability of foodgrains.
1938-39	48,287	6,641	397	7,038	6,388	17.60
1939-40	48,823	7,215	548	7,763	6,459	19.20
1940-41	49,342	7,984	204	8,188	6,528	20.00
1941-42	49,890	7,591	175	7,766	6,600	18.88
1942-43	50,444	6,954	227	6,727	6,674	16.16
1943-44	51,004	7,373	82	7,455	6,748	17.60
1944-45	51,570	7,478	46	7,524	6,823	17.60
1945-46	52,142	6,118	388	6,506	6,899	15.04
1946-47	52,721	6,861	185	7,046	6,977	16.16
1947-48	53,313	5,687	256	5,943	7,054	13.44

The above statement shows the general average ration per adult per day. In actual fact, the rural population engaged in agricultural and allied occupations had to be allowed a minimum of 16 ounces per adult per diem in addition to their requirements for seed and customary wages in kind. The non-agricultural section of the population, largely living in urban areas, had to be put on a statutory ration which has been reduced by stages from 16 ounces in 1943-44 to 10

ounces. Later as the food situation became critical, rural rationing was resorted to, first in the deficit districts like Malabar and later extended to other districts. By the middle of 1946, the entire population of the Province—urban as well as rural—was put on ration of some form or other. The magnitude of the problem of procurement and imports of foodgrains may be seen from the following statement:—

*Procurement and Imports of Foodgrains.**

(in thousand tons)

Year.	Quantity Procured. Rice.	Millets.	Total.	Quantity Imported. Rice.	Millets.	Wheat.	Total	Quantity available during the year.
1943-44	8.41	...	8,41	...	25	48	73	9,14
1944-45	10,25	27	10,52	17	29	100	116	11,98
1945-46	13,14	1,17	14,31	2,69	121	214	604	30,35
1946-47	14.98	1,24	16,22	1,41	45	65	251	18,73
1947-48	9,47	25	9,72	2,68	197	44	509	14,81
1948-49	13,24	13,97	27,21	(Not available)				

* Figures refer to Kharif Year, 1st November to 31st October.

FOOD SUPPLY IN THE PROVINCE

The food supply of the Province consists of energy foods like cereals, pulses, sugar, root crops and protective foods like milk, meat, fish, eggs, fruits and vegetables. In 1947-48, this Province produced 4,329,640 tons of rice, 2,153,100 tons of millets (cleaned grains), 243,950 tons of pulses, 753,500 tons of jaggery, 210,470 tons of onions, 46,530 tons of potatoes, 136,800 tons of sweet potatoes and 94,410 tons of tapioca.

Statement showing the area and yield of certain food crops in the Province of Madras 1947-48.

Crop.	Area in acres.	Yield in tons.	
Paddy	10,434,149	4,329,640	(rice)
Millets	10,325,258	2,153,100	(cleaned grains)
Pulses	2,775,623	243,950	
Sugarcane	272,680	753,500	(in terms of jaggery)
Onions	52,205	210,470	
Potatoes	15,516	46,530	
Sweet Potatoes	33,660	136,800	
Tapioca	32,954	94,410	

Protective Foods.

The principal protective foods consumed in this Province are milk, meat, fish, eggs, ghee and vegetable oils, fruits and vegetables.

Milk:

The normal consumption of fresh fluid milk has been estimated at 12,123,000 cwts. per year. The requirements on the basis of 8 ounces per adult per diem works out to 71,245,000 cwts., leaving a deficit of 59,122,000 cwts. The available supply gives a rate of consumption of only 1.36 oz. per adult per diem.

Meat and Fish:

On the basis of the Livestock census held in December 1944 it has been estimated that 2,520,716 sheep and 1,301,086 goats are available for slaughter for civilian consumption in the Province. On the assumption that the average dressed weights of meat obtained from each sheep and goat are 16 to 18 lb. and 18 to 20 lb. respectively, the quantity of meat available for consumption in the Province works out to 30,166 tons. The average quantity of fish of all kinds available for

consumption during the five years ending 1939-40 was 176,291 tons. The total quantity of meat and fish available for consumption in the Province is 206,457 tons. The requirements of meat and fish at 3 oz. per adult per diem works out to 1,335,535 tons, resulting in a deficit of 1,129,078 tons. The available supply of meat and fish gives a rate of consumption of only 0.46 oz. per adult per diem.

Eggs:

The quantity of eggs available for consumption in the Province was estimated at 324,740,000 eggs for the year 1944.* This may be taken as the normal production of eggs available for consumption. The requirements of eggs in the Province at the rate of 1 per adult per diem works out to 15,958,877,480 eggs resulting in a deficit of 15,634,137,480. The available supply of eggs gives a rate of 0.02 egg per adult per diem.

Ghee and Vegetable Oils:

The normal production of Ghee was estimated at 36,958 tons and the normal production of vegetable ghee at 3,650 tons. The average production of groundnut oil and gingelly oil available for consumption during the five years ending 1940-41 was 184,646 tons and 37,758 tons respectively. The normal production of coconut oil was estimated at 33,632 tons. The total quantity of Ghee and Vegetable oils available for consumption works out to 296,994 tons. The requirements of ghee and vegetable oils at 2 oz. per adult per diem works out to 950,235 tons resulting in a deficit of 654,241 tons. The available supply gives a rate of 0.63 oz. per adult per diem.

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* The estimated consumption of fowl and duck eggs are **237.5 and 76.1 millions in 1945.**

Fruits:

The most important fruits in this Province are plantains, mangoes and citrus fruits. The average area for the 3 years ending 1947-48 under plantains was 162,873 acres yielding 1,161,486 tons, under mangoes 240,593 acres yielding 556,183 tons and under citrus fruits 72,310 acres yielding 96,140 tons. The area under cocoanuts is estimated to be 615,983 acres yielding about 154,000 tons of nuts. In the matter of fruits, this Province has a surplus of about 4.6 lakhs tons against the requirements of 13.5 lakhs at 3 oz. per adult per diem. The available yield affords 4.01 oz. per adult per diem.

Vegetables:

The normal production of vegetables available for consumption in the province may be taken at 612,584 tons being the average of the production during the years 1939-40 and 1940-41. The requirements of vegetables, at 10 ozs. per adult per diem, works out to 4,452,635 tons resulting in a deficit of 3,840,051 tons. The available production gives a rate of consumption at 1.38 oz. per adult per diem.

FOOD SUPPLY AND REQUIREMENTS.

The requirements and actual domestic production of foodgrains and other food stuffs are tabulated below: —

Description.		Production.	Requirements	Deficit — or Surplus +
Foodgrains	(tons)	6,483,000	7,054,000	−571,000
Meat & Fish	,,	206,457	1,335,535	−1,129,078
Eggs	(Nos.)	324,740,000	15,958,877,480	−15,634,137,480
Ghee & Vegetable Oil	(tons)	296,994	950,235	−654,241
Fruits	(lakhs)	15.1	8.3	+6.8
Vegetables	,,	612,584	4,452,635	−3,840,051
Milk	(cwts.)	12,123,000	89,055,985	−76,932,985

Agricultural Implements and Machinery.

According to the census held in December 1944, the number and value of agricultural implements and machinery are as follows:—

Description	Number	Average value per unit. Rs.	Total value Rs.
Ploughs:			
Wooden	3,878,868	7	2,71,52,076
Iron	52,184	15	7,82,760
Total	3,931,052		2,79,34,836
Carts	1,179,013	500	58,95,06,500
Sugarcane Crushers:			
Worked by power	1,776	1,500	26,64,000
Worked by bullocks	25,506	400	1,02,02,400
Oil engines with pumps for irrigation	3,609	3,000	1,08,27,000
Electric Pumps for tube wells	4,307	1,000	43,07,000
Tractors	332	4,000	13,28,000
Indigo Vats	9,120	300	27,36,000
Total			67,74,40,572

The number of ploughs, wooden and iron, per 100 acres of cultivated land is 11 in this Province. The total value of the agricultural implements, etc., is estimated to be Rs. 67.74 crores.

Livestock.

The livestock census taken in December 1944 revealed that this Province possessed the following categories of livestock including poultry:—

Description	Number
Cattle	16,354,914
Buffaloes	6,289,325
Sheep	10,569,189
Goats	6,087,650
Horses & Ponies	50,016
Mules	259
Donkeys	154,234
Camels	119
Others	**754,054**
Total Livestock	40,259,760
Poultry	14,775,084

Cattle occupy a pivotal position in the agricultural economy of this Province. Bullocks supply motive power for ploughing, lifting water and drawing carts and cows supply the important article of food —milk. The number of bulls and bullocks per 100 acres of cultivated land in this Province is 35.8 against 36.4 in the U.P., 41.2 in Bihar, and 15.6 in Bombay. The number of cows per 1,000 of the population in this Province is 141.8 against 173.5 in U.P., 147.3 in Bihar and 141.7 in Bombay Province. The number of buffaloes per 1,000 of the population in this Province is 220.5 against 302.7 in U.P., 425.3 in Bihar, 466.8 in Bombay and 390.9 in C.P.

Share of Primary Services in the National Income of the Province.

The provincial economy is dominated by agriculture; about 38.2 millions (1949) or 71 per cent of the population are dependent on agriculture, deriving about Rs. 865.4 crores or 63.15 per cent of the Provincial National Income. Judged by both the number employed in and dependent on and the value of the produced realised, agriculture is still the premier occupation of the Province. Estimates of earnings of Primary Services in other provinces are given below for comparison.

*Distribution of National Income—Primary Services.**

Province	Total National Income 1949-50 (in Crores)	Income from the Primary Services 1949-50 (in Crores)	Percentage to total National Income
Madras	1,370.4	865.4	63.15
Bombay	857.1	480.8	56.10
C.P.	558.8	432.7	77.43
U.P.	1,245.7	913.5	73.33
Bihar	581.3	432.7	74.44
Assam	249.3	192.3	77.14
Orissa	212.9	144.2	67.73
East Punjab	257.5	185.1	71.88
West Bengal	324.5	203.6	62.74

AGRICULTURAL DEPARTMENT

Origin and Functions.

The recommendations of the Famine Commission of 1901 led to the expansion of the Imperial and Provincial Departments of Agriculture from 1905 onwards. From 1906, the department was placed under the charge of a wholetime Director. In the earlier years, it was generally attending to agricultural education, research, operations against pests, introduction of improved implements, propaganda and demonstration. In recent years, several new functions have been added, such as agricultural engineering, trading schemes and agricultural marketing.

Agricultural Education.

There are two Agricultural Colleges at Coimbatore and Bapatla (Guntur district) admitting 96 students each. A few seats are allotted every year to students from West Bengal, Coorg, Orissa and other regions. The students are taken on educational tours to places of

* *Vide* An Essay on National Income and Expenditure by **Dr. B. Natarajan.**

agricultural interest like Nilgiris, Kodur, Hagari, Guntur, Nellikuppam, Aduthurai, Coimbatore, Bangalore and Hosur.

A short course on Bee-keeping is conducted by the Government Entomologist.

Agricultural Training School at Orathanad, Pattukottai taluk has been started (in June 1947) with the object of imparting scientific and practical training in agriculture to agriculturists of Tanjore District. Juvenile and Adult Labourers' Schools have been started at Anakapalle, Samalkota, Palur and Coimbatore and the total strength in them is 146.

Research.

The Agricultural Research Institute at Coimbatore directs and carries out the research work done by the Department in agricultural chemistry, entomlogy, mycology, agricultural meteorology, crop breeding and botany, research in soils, manures, plant nutrition, plant physiology and plant chemistry including vernalisation in rice, animal nutrition, soil microbiology, etc. Special mention may be made of researches in the suitability of barley types from different parts of the country for malting, utilization of fungal diastase for malt production, jaggery making analysis of palmyra jaggery for sucrose content, manufacture of agaragar from seaweed *Cracilaria lichenoides*, preservation of cashew-nut kernels intended for export, etc., for the development of agro-industries. A Bio-chemist in charge of the production of cholam malt and its derivations, has been replaced by an Assistant Agricultural Chemist in June 1948. Cholam and wheat malt extracts, canning of mangoes, pomelos, loose jacket oranges, experimental production of lime, lemon and orange juices, squashes and cordials, malted

juices, jams, jellies, marmalades, candied fruit, dehydrated products, food yeast, etc., were the many lines of investigation and experiment in the possibilities of setting up agro-industries.

Entomology and Mycology.

The entomology section concentrates its activities on the study and control of insect pests of crops such as pests of sugarcane, paddy, cholam, vegetables, chillies, redgram, cocoanut, seed potatoes, pests on stored rice, dum-nut buttons, weed killers and insecticides. The mycology section is concerned with the study and control of diseases affecting crops like paddy blast, foot-rot of paddy, grain smut, rusts, foliocellosis in oranges, blackarm in cotton, broom rape in tobacco, mosaic disease of sugarcane, etc. A Research Council consisting of the heads of the different research sections in the Institute scrutinizes the programme of work and reports on investigations and schemes under execution in the Agricultural Department.

Agricultural Meteorology.

The Agricultural meteorology section was opened from February 1948 with the object of collecting data on the influence of climatic factors on growth of crops, their yields and the incidence of pests and diseases.

Crop Breeding and Botany.

The improvement of crops is the major activity of the research wing of the Department. The work is carried out chiefly by Crop Specialists dealing with each important crop at Coimbatore and by the Assistant Crop Specialists and Superintendents of Agricultural Research Stations. The main objects of Crop improvement work is the evolution of suitable strains for each tract varying in climatic soil and agricultural conditions; and it is carried out (1) by the introduction of new varieties, (2) by breeding strains with desirable characters

and (3) by hybridization for the purpose of securing better yield, better quality, disease resistance, etc., New and improved strains of paddy, millets, oil seeds, cotton, pulses, sugarcane and fruits are being introduced. The Fruit Research Stations at Kodur, Coonoor, Kallar, Burliar and Patamaila and the Agricultural Research Stations at Taliparamba, Anakapalle, Araku Valley, Wynaad, Lam and College Orchard, Coimbatore are engaged in researches in acid lime, mangoes, vines, apple, plum, pears, cape-gooseberry, tree-tomato, passion fruit, etc.

Systematic Botany.

In the section of Systematic Botany, information regarding botanical names, distribution and availability and economic uses of plans, is given; several exotic plants are studied and collections of botanical materials made. The botanical garden, Coimbatore, is supplying on an increased scale seeds and plants. In 1947-48, 10,000 cuttings of the Australian seedless grape vine cuttings were planted for rooting and to supply rooted cutting to the public on a large scale.

Sugarcane Research.

Results of sugarcane research are tried out in the holdings of cultivators for confirmation and extension. The following were the demonstrations carried out in 1947-48:—

Number and Nature of improvement.	No. of demonstrations.	Area covered. (Acres)
1. Cultural	5,965	62,166
2. Varietal	6,474	56,501
3. Manurial	2,785	47,748
4. Control of pests and diseases	2,057	3,187
5. Jaggery making	8,170	...
Total ...	25,451	1,69,602

Soil Chemistry and Irrigation Research.

Research work is carried on in soil chemistry at Bapatla, in dry farming development at Bellary, and in irrigation at Siruguppa. At the Irrigation Research Station at the latter place, special studies are made about the effects of light and heavy irrigation on crop yields; agronomic studies in the garden, wet and dry land blocks are also undertaken.

Propaganda and Demonstration.

In recent years, the district staff are concentrating their attention on the following items with a view to furthering the Grow More Food Campaign:—

(*a*) Bringing waste lands under cultivation with the aid of tractors and bull-dozers wherever possible;

(*b*) supply of seed of high yielding strains of food crops and arranging for seed farms for multiplying pure seeds for distribution to cultivators;

(*c*) supply of manures at controlled rates, free of cost to poor and deserving ryots and as part of interest-free loans granted to ryots;

(*d*) supply of iron materials such as improved implements, cart tyres, iron sheeting for cattle sheds and plough shares;

(*e*) popularizing improved cultural, manurial and irrigational practices in growing food-crops;

(*f*) popularizing growing of green manure plants and shrubs and trees which yield leaves useful as manure or other economically useful products such as fuel, fodder, etc.,

in all available lands and vacant spaces such as channel bunds and field and road edges ;

(g) increasing vegetable production by supplying seeds and manure and giving technical advice in important towns ;

(h) increasing the area under short-term food crops and off season cultivation of food crops ;

(i) free supply of food crops and green manure crops to poor and deserving ryots ; and

(j) distribution of Grow More Food literature published by the department to cultivators.

Special District Agricultural Officers are appointed in several districts for crop-cutting experiments on paddy.

The Agricultural Engineering Supervisors are appointed in all districts to help ryots in obtaining and working oil and petrol-engine driven pump-sets and tractors for deep ploughing and reclaiming waste lands for cultivation.

The Department is publishing Grow More Food Journals *"Mezhichelvam"* in Tamil and *"Padipantalu"* in Telugu. Exhibitions and shows are held during festivals, conferences and public functions. In 1947-48, 172 exhibitions and shows were held.

Seed Production Scheme.

This Province has several seed production schemes and they have been merged with the Five Year Plan to grow more food. The multiplication and distribution of improved seeds is a major item of

these schemes. The area under seed farms, quantities of seeds sold for sowing purposes and the area covered are given below:—

Seed Production.

Variety	Area under seed farms (Acres)		Quantity Distributed				Area Covered	
	1946-47	1947-48	1946-47 Tons	Lbs.	1947-48 Tons	Lbs.	1946-47	1947-48
Paddy	30,979	34,987	12,540	...	9,030	1,181	6,23,380	4,04,580
Ragi	423	1,151	19	1,891	101	984	10,477	15,148
Cholam	574	2,654	27	1,574			6,724	
Cumbu	1,342	672	5	911			4,037	
Korra	1,282	1,880	3	2,392			2,787	

Distribution of Seeds and Seedlings.

Cultivators are supplied with improved seeds, cuttings, suckers, grafts and seedlings through the agency of the department. Seeds are supplied for the cultivation of maize, cholam, lucerne, tobacco, etc., suckers for plantain and pineapple, grafts for mango, orange and sapota and cuttings of grapes. Propaganda is being carried on for extension of cultivation of specified crops and increases of yield. Large quantities of seeds and seedlings and cuttings of quick growing plants and shrubs are being distributed to ryots. Over 70 lakhs of seedlings of plants and shrubs such as glyrecidia, lucaena glauca, caletropis, malaipoovarasu, adathoda, neem, pungam, etc., were planted in the various districts in 1947-48. Among the seeds of green manure, kolinji, daincha, sunhemp, pillipesara, indigo are important and the quantities distributed covered 104,350 acres in 1947-48.

Distribution of Agricultural Implements and Machinery.

The Agricultural Department also popularises improved implements by widespread demonstrations of the efficacy of tractors, heavy ploughs and bull-dozers.

The number of implements sold or hired out and the number of demonstrations carried out in 1947-48 are given below:—

Implements or Machines.

Implement or machine	Number distributed.	Number hired.	Demonstrations
Tractors	4	34	639
Small Ploughs	12,846	564	21,769
Other implements	235,326	173	22,225
Water Lifts	4,467	...	...
Sugarcane Mills	22	29	75
Chaffcutters	51	4	197
Jaggery pans	1,320	7	27
Spare parts	60,386	115	...

The evil of soil erosion is being tackled by anti-erosion methods like terracing, levelling, contour bunding, construction of spillways, surplus weirs and hedge planting. The number of demonstrations carried out and the area covered are shown below:—

Items of Work	Number of demonstrations.	Area covered (Acres)
Terracing	815	5,825
Levelling	3,788	12,358
Contour Bunding	4,008	30,550
Hedge Planting	1,137	126,756
Contour Ploughing & Planting	5,882	39,036
Construction of spillways and check dams and gully plugging	807	5,774
Total ...	16,437	220,299

Interest free taccavi loans are being granted to cultivators for the purchase of seeds, manures and implements. In 1947-48, a total of Rs. 19,78,318 was granted to 29,323 cultivators.

State Trading Schemes.

Procurement and distribution of oilcakes, chemical fertilisers and bonemeal, iron and steel for agricultural implements and machinery are being undertaken by the Agricultural Department. The quantities distributed in the three years 1946-47 to 1948-49 are tabulated below:—

Fertilizers

Year	Requirements (Tons)	Allotments (Tons)	Quantity supplied (Tons)
1944-45	Not available	31,646	31,646
1945-46	72,500	68,680	68,680
1946-47	76,000	67,350	66,009
1947-48	77,500	62,560	57,719
Total ...		230,236	224,054

Groundnut Cake.

Year	Requirements (tons)	Quantity distributed (tons)	Estimated production of foodgrains. (tons of rice)
1944-45	4,00,000	57,320	28,660
1945-46	4,00,000	1,13,285	56,642.5
1946-47	4,00,000	2,35,200	1,17,600.0
1947-48	4,00,000	1,61,051	80,525.5
Total ...	16,00,000	5,66,856	2,83,428.0

Other oil cakes distributed (in tons)

Year	Castor cake	Other oil cakes.	Total	Estimated production of rice (tons)
1944-45	4,666	...	4,646	2,333.0
1945-46	3,760	89	3,849	1,924.5
1946-47	2,664	...	2,664	1,332.0
Total ...	11,090	89	11,179	5,589.5

Improved strains of seeds.

Year	Area of seed farms (acres)	Quantity of seeds produced (Tons)
1943-44	25,720	16,535
1944-45	29,368	
1944-45	29,363	19,089
1945-46	33,378	19,549
1946-47	34,600	21,995
1947-48	34,987	20,492
Total ...	1,58,053	97,660

Iron and Steel.

Year	Requirements (Tons)	Allotments (Tons)	Quantity supplied (Tons)
1944	6,878	3,626	777
1945	17,127	12,351	6,053
1946	23,105	15,123	13,087
1947	50,895	5,468	5,634
Total ...	98,005	36,568	25,551

Agricultural Marketing.

With the object of effecting marketing improvements by more frequent and direct contact with growers, the Marketing Section was reorganized (in April 1948) by setting up 4 regional units with headquarters at Rajahmundry, Cuddapah, Tiruchirapalli and Coimbatore. Market surveys were conducted in respect of animal fats and by-products, betel leaves and cotton seed in 1947-48. Other articles on which information was collected were fish, rice, groundnuts, gingelly, millets, pulses, mangoes, tobacco, poultry and milk. Grading of eggs, sathgudi oranges, ghee, and cigarette tobacco is being done at important centres. The co-operative marketing societies were also helped by this section in grading and marketing their produce; e.g., Koduru Fruit Growers' Society and Egg Marketing Societies in Salem and North Arcot Districts. There are regulated markets for cotton at Tiruppur, Nandyal, and Adoni, for groundnut in South Arcot District and for tobacco in Guntur District and Vijiawada taluk of the Krishna district with their own market committees functioning. The market intelligence is supplied to growers, Co-operative societies, Government departments, and trade and to the Government of India, all Madras dailies, important municipalities and district boards and All-India Radio.

Cost of Administrative Services.

The cost of administrative personnel in the years from 1946-47 to 1949-50 is tabulated below: —

	1946-47	1947-48	1948-49	1949-50
		(in lakhs of rupees)		
Pay of Officers	5.69	6.29	5.56	5.78
Pay of Establishments	18.91	17.03	18.55	20.13
Allowances & Honoraria: —				
Officers	16.74	11.23	3.22	2.91
Establishments	...	...	9.77	10.60
Total ...	41.34	34.64	37.10	39.42

Expenditure on Agriculture.

Expenditure on Agriculture in this Province has risen from Rs. 20.62 lakhs in 1938-39 to Rs. 136.24 lakhs in 1949-50. From Re. 0-1-0 in the former year, the per capita expenditure has risen to Re. 0-7-3 in this period. There has been more than seven-fold rise, yet it is only about one-third of that in Bombay which incurs the highest per capita expenditure in India.

III. IRRIGATION.

Sources of Irrigation.

In Irrigation Works, this Province can boast of great achievements since the days of Karikala Chola dating back to 2,000 years. At present irrigation is provided by Government canals, private channels, tanks, wells, and other sources including spring channels, kasams, etc., for 9.862 million acres out of 31.035 million acres of cultivated land. The distribution of irrigated area according to sources is shown in the statement given below: —

Irrigated area in the Madras Province.

Sources	Area irrigated (Acres)	Percentage to total irrigated
Government Canals	4,308,721	43.8
Private Channels	149,761	1.5
Tanks	3,445,939	34.9
Wells having independent ayacuts	1,616,519	16.4
Spring channels, kasams and other sources.*	341,661	3.4
Total ...	9,862,601	100.0

The irrigated area, forming 31.82 per cent of the total cultivated area in this Province is the highest in India excepting East Punjab, the corresponding percentages for other provinces being 31.3 per cent in U.P., 6.5 per cent in C.P., 30.5 per cent in Bihar, 4.9 per cent in Bombay, 43.8 per cent in East Punjab, 22.6 per cent in Assam, 25.9 per cent in Orissa and 20.5 per cent in West Bengal.

* Wells supplement recognised sources of irrigation by 280,573 acres or about 2.8 per cent.

Important Irrigation Systems.

The irrigation map of this Province shows a wide distribution of irrigated tracts, small and big, all over the province. The more important among them with their areas are shown below:—

Important Irrigation Systems in the Province of Madras (1947).

Irrigation Systems.	*District benefited.*	*Area* (acres)
Godavari Delta System:		
	East Godavari	546,022
	Tanjore	955,958
	West Godavari	658,101
	Krishna	2,743
	Total ...	1,206,866
Krishna Delta System:		
	West Godavari	41,106
	Krishna	540,290
	Guntur	406,219
	Total ...	987,615
Kurnool-Cuddapah Canal:		
	Kurnool	45,153
	Cuddapah	35,841
	Total ...	80,994

Irrigation System.	Districts benefited.	Area (acres)
Pennar River Canal System:		
	Nellore	198,118
	Total ...	198,118
Cauvery Delta System:		
	Tiruchirapalli	76,889
	Total ...	1,032,847
Cauvery-Mettur Project:		
	Tanjore	195,093
	Total ...	195,093
Periyar System:		
	Madura	191,774
	Ramnad	628
	Total ...	192,402
Srivaikuntam & Marudur Anicut System:		
	Tirunelveli	71,576
	Total ...	71,576
Tank Districts:		
	South Arcot	303,389
	Chingleput	399,632
	North Arcot	241,069
	Total ...	944,090
	GRAND TOTAL ...	4,909,601

Investment in Irrigation Works.

Tanks.—There are about 35,000 tanks, which were construcetd by the ancient Tamil Kings, Chera, Chola and Pandya followed up by the latter Pallavas, Chalukyas, Hoysalas and Rayas of Vijayanagar. Receipts by way of irrigation rates from the 27,000 tanks in the ryotwari areas alone amount to Rs. 95 lakhs per annum. About a century ago, the East India Company estimated that tanks in 15 districts alone were worth Rs. 15 crores. Adjusted to price changes, their value may be of the order of Rs. 350 crores. The area irrigated by these tanks is about 3.5 million acres.

Productive and Unproductive Works.

The irrigation works of this Province constructed or repaired under British rule are divided into Productive and Unproductive Works. The capital outlay on them with the area irirgated is shown below:—

Works	Capital outlay Rs.	Area irrigated by the complete project. (acres)
Productive	15,37,45,818	3,877,902
Unproductive	3,79,13,258	389,264
Total ...	19,16,59,076	4,267,166

Irrigation Programme.

The P.W.D. of the Government of Madras has a huge irrigation programme consisting of four major irrigation schemes for areas over a lakh of acres, 21 middle-sized schemes for areas between 10,000 acres and 100,000 acres and a large number of small schemes, each irrigating less than 10,000 acres.

The middle-sized irrigation works that would be completed by the end of 1956 with estimated costs and areas of ayacut are given below: —

S. No.	Description.	Probable cost of the scheme (Rs)	Probable Ayacut. (Acres)	The year in which full ayacut will be reached.
1.	Gandikota Project	3,45,00,000	100,000	1955
2.	Tammuleru Reservoir	1,10,00,000	16,900	1954
3.	Budameru Reservoir	1,10,00,000	20,000	1954
4.	Perur Project	75,00,000	10,500	1953
5.	Bhairavanipatta Project	60,00,000	10,000	1953
6.	Kattalai High Level Channel	90,00,000	20,000	1953
7.	Pullambadi	80,00,0000	22,000	1953
8.	Kanhirapuzha	1,50,00,000	25,000	1954
9.	Walayar Reservoir Scheme	40,00,000	16,000	1954
10.	Canals from Mettur Reservoir	2,45,00,000	45,000	1953
11.	Vamsadhara Project	1,80,00,000	30,000	1955
12.	Makkuvageda Project	70,00,000	12,000	1955
13.	Reservoir across Janjavati	1,10,00,000	11,000	1955
14.	Tuni or Thandava Resevroir	80,00,000	13,300	1955
15.	Gundlakamma	1,50,00,000	28,500	1956
16.	Mid-Pennar Project	60,00,000	10,500	1954
17.	Rallapad Reservoir	75,00,000	14,800	1954
18.	Sathanur Reservoir	1,24,00,000	20,000	1955
19.	Aliyar Dam	60,00,000	10,000	1954
20.	Vaigai Reservoir Scheme	1,65,00,000	12,500	1956
21.	Malanpuzha	3,60,00,000	40,000	1956
	Total ...	27,39,00,000	4,88,000	

The total cost of all the 23 middle-sized irrigation schemes is estimated at Rs. 27,39 lakhs and the extent of ayacut that will be brought under irrigation by 1956, at 4,88,000 acres.

Major Irrigation Works.

The four major irrigation works are the Tungabhadra, Lower Bhavani, Krishna-Pennar and Ramapadasagar Projects. The former two are under execution and the latter are in the preliminary stages of investigation. The estimated cost and the area that will be brought under irrigation are shown in the following statement: —

Project	Etsimated cost in Rs. (lakhs)	Area that will be irrigated in acres.
Lower Bhavani	7,00	207,000
Tungabhadra	16,00	294,210
Krishna-Pennar	78,00	3,000,000
Ramapadasagar	129,00	2,746,000
Total ...		

The completion of the first two projects together with the 23 middle-sized schemes will bring an additional area of 1,039,000 acres, capable of adding 5 lakhs tons of foodgrains to the existing supply.

Cost of Administrative Services.

The cost of administrative and technical staff in the years from 1946-47 to 1949-50 is tabulated below: —

	1946-47	1947-48	1948-49	1949-50
		(Rs. in lakhs)		
Pay and allowances of Establishments including pension charges	2.64	7.96	8.05	3.85
Other charges	2.60	4.11	5.37	1.92
Works (including maintenance and repairs, tools and plant, etc.)	130.40	152.59	193.83	342.58

IV. MINERAL WEALTH OF THE PROVINCE.

Output.

With the exception of highgrade coal, this Province has a variety of mineral deposits; some of them are meagrely exploited and some are not yet tapped. The best illustration of the latter are the lignite ores of South Arcot district and the iron ores of Salem. The output of some important minerals is given below:—

Output of Minerals in the Province of Madras.

Minerals	Output (Tons)
Mica	1,654
Graphite	25
Limestone	356,258
Barytes	5,137
Yellore Ochre	962
Red Oxide of iron	837
Steatite (cwts.)	774
China Clay	4,424
Gypsum	23,251
Lime Shell	700
Gold (ounces)	7.14
Magnesite	51,673
Bauxite	1,368
Phosphatic Nodules	853
Felspar	228

Exports.

The mineral wealth of this Province could be seen from the statistics of export trade of this Province in the important minerals compared with that of India.

Exports of Minerals in 1948-49.

Mineral	MADRAS Quantity (Tons)	% of Madras to India	Value Rs. 000	% of Madras to India	INDIA Quantity (Tons)	Value Rs. 000
Manganese	214.243	69.35	1,23,79	68.35	308,895	1,81,100
Magnesite	14,647	100	13,63	100	14,647	13,63
Mica	3,646	21.44	10,98	18.73	16,998	5,92,38
Monazite	1,950	100	2,54	100	1,950	2,54
Chromite	2,300	5.56	1,04	5,22	41,310	19,90

Reserves.

The Geological Survey of India have estimated the reserves of certain important minerals and fixed their location in this Province.

Minerals.	Reserves available in tons.	Location.
Lignite	498 million	South Arcot District.
Manganese	2.5 ,,	Kodur, Sandur and Visakhapatnam.
Magnesite	82.953 ,,	Salem.
Mica	Belt of 15 to 20 miles broad and 60 miles long.	Kavali, Atmakur, Rapur and Gudur.
Monazite	A few thousand tons.	Malabar, Tanjore, and Tirunelveli.
Chromite	100,000 tons	Salem and Krishna District.
Iron	303.650 millions tons	Salem.
	130 ,, ,,	Sandur.
	3.704 ,, ,,	Ramalakota, Kurnool District.
Bauxite	2.5 ,, ,,	Shevaroy Hills, Salem.

Minerals.	Reserves available in tons.	Location.
Copper	Not Estimated	Nellore, Coimbatore, and Guntur.
Asbestos	256,000	Cuddapah District.
Barytes	Not Estimated	Nellore, Salem and Ceded Districts.
Chalk	2,000,000 tons	Tiruchirapalli.
	639,000 ,,	Salem.
Sedinatory limestone, nodular limestone and laterite	Not estimated.	Kurnool, Ramnad.
	Several sq. miles with a thickness of 20 ft.	Guntur.
Steatite	Not estimated	Anantapur, Kurnool.
Gypsum	16 miles long and 8 miles broad belt	Tiruchirapalli, Sulurpet, Nellore District.
Ilmenite	9,15,610 tons	Ponani Taluq.
	31,916 ,,	Tirunelveli District.
	89,607 ,,	Tranquebar, Tanjore District.
	50,000 ,,	Tirunelveli District.
Garnet	5,000 ,,	Visakhapatnam.
Apatite	Not Estimated	Nellore District.
Beryllum		

V. INDUSTRIES.

The most important industries of the Province are Textiles, Engineering, Sugar, Tobacco, Matches, Oil milling, Bricks and tiles manufacture, Cement, Lime, Potteries, Tanning, Ginning and Pressing.

Textiles.

This Province has 81 cotton spinning, weaving and other factories employing daily about 91,440 workers. Coimbatore with 32 mills has come to be known as Manchester of South India. Next comes Mathurai with 14 mills followed by Ramnad and Tirunelveli with 6 and 5 mills respectively. Although Madras City has only one mill, it employs 14,893 workers and is one of the biggest and most up to date weaving mills in the East. The five centres alone employ about 82,849 out of the total 91,440 workers. The Province of Madras has 30 per cent of the total cotton textile mills and employs 14 per cent of the total cotton textile workers in India.

Engineering.

The next biggest industry in the Province is engineering. There are 402 engineering concerns (most of which are only Workshops) employing 22,710 workers a day. Twenty-five per cent of the total number of factories, employing one-third of the total number of workers are situated in Madras City.

Sugar.

There are 4 perennial and 7 seasonal sugar mills in the province employing over 4,000 workers.

Matches.

The industry is localised in Ramnad and Tirunelveli Districts which have 62 and 14 factories employing 4,290 and 862 workers respectively. Madras and these two districts alone employ more than 5,600 workers or about 92 per cent of the total.

Gins and Presses.

There are 292 gins and presses employing 12,993 persons. The gins are chiefly located in the districts of Bellary, Coimbatore, Anantapur, Ramnad and Tirunelveli and they have among themselves 228 factories employing 10,650 workers.

Tanning.

South India is noted for its tanning industry. Importing large quantities of raw hides and skins from the East Pakistan and North India, this province exports to foreign markets tanned hides and skins valued at more than Rs. 11 crores per annum. There are 212 tanneries employing 8,008 workers daily.

Cement.

The total number of Cement factories in this Province is five with a capacity for production of 460,000 tons per anunm. Of them, four older factories have sanction for expansion of their capacities by an additional 360,000 tons per annum. Two more new factories, sanctioned by the Government of India will have capacity for producing 200,000 tons. When these factories begin to produce the total productive capacity for cement will be 10,20,000 tons.

Industrial Employment.

This Province has a well developed textile industry and fairly advanced engineering industry and a number of rice mills, oil mills, printing and book-binding works, gins and presses and tanneries. In the textiles groups there are 120 factories employing 101,464. Industries relating to food, drink and tobacco, the next biggest group employ 42,513 persons in 1,362 perennial and 4,378 persons in 44 seasonal factories. The third largest group of industries is engineering with 402 factories employing 22,710 workers. Chemicals, dyes, etc., employ about 17,348 workers in 388 factories. Wood, stone and glass group has 216 factories providing employment to 19,000 workers. There are 212 tanneries employing over 8,000 workers. The total number of seasonal and perennial factories is 3,761 employing over 2.77 lakhs of workers.

Number of Perennial Factories with Statistics of Employment, 1947.

Textiles:

	Number of factories	Average daily No. of workers.
Cotton (Spinning, weaving and other factories)	81	91,440
Hosiery	16	2,030
Jute Mills	4	6,857
Silk Mills	7	322
Woollen Mills	6	309
Miscellaneous	6	506
Total ...	120	101,464

	Number of factories	Average daily No. of workers.
Engineering:		
Coach Building and Motor Car Repairing	223	9,471
Electrical Engineering	6	460
Electrical Generating and Transforming Stations	3	14
General Engineering	129	7,170
Kerosene tinning & Packing	3	506
Ship building & Engineering	2	2,980
Steel trunk, lock & cutlery	11	440
Tramway Works	1	543
Miscellaneous	24	1,126
Total ...	402	22,710

	Number of factories	Average daily No. of workers.
Minerals and Metals:		
Foundries	40	1,703
Iron and steel melting and Steel rolling mills	3	410
Petroleum Refineries	6	334
Miscellaneous	30	2,291
Total ...	79	4,738

	Number of Factories	Average daily No. of workers.
Food, Drink and Tobacco:		
Bakeries, biscuits and confectionery	22	1,557
Breweries & Distilleries	5	112
Coffee	7	493
Tea	78	4,664
Dairy Produce	1	35
Flour Mills	1	10
Food canning & Bottling	1	10
Ice and aerated waters	1	29
Rice Mills	995	14,764
Sugar	4	1,736
Tobacco	16	7,889
Miscellaneous	231	11,214
Total ...	1,362	42,513
Chemicals, Dyes, etc.:		
Bones and Manures	13	418
Chemicals	8	1,860
Matches	98	6,113
Oil Mills	198	6,431
Paints	1	78
Soaps	3	214
Miscellaneous	67	2,270
Total ...	388	17,384

	Number of Factories	Average daily No. of workers.
Paper and Printing:		
Paper Mills	1	696
Printing and book-binding, etc.	339	9,246
Miscellaneous	15	609
Total ...	355	10,551
Wood, Stone and Glass:		
Bricks and Tiles	75	8,462
Carpentry and Cabinet making	6	1,012
Cement, Lime and Potteries	7	3,307
Glass	5	851
Saw Mills	39	1,874
Stone Dressing	16	409
Miscellaneous	68	3,087
Total ...	216	19,002
Gins and Presses:		
Micellaneous	154	5,715
Total ...	154	5,715
Skins and Hides:		
Leather and shoes	3	139
Tanneries	212	8,008
Miscellaneous	4	104
Total ...	219	8,251

	Number of Factories	Average daily No. of Workers.
Miscellaneous:		
Rope Works	8	622
Miscellaneous	27	2,800
Total ...	35	3,422

Number of Seasonal Factories with Statistics of Employment.

	Number of Factories	Average daily No. of Workers.
Food, Drink and Tobacco:		
Coffee	12	1,166
Sugar	7	2,407
Miscellaneous	25	805
Total ...	44	4,378
Gins and Presses:		
Cotton Ginning	151	8,135
Cotton Ginning and Baling	12	176
Cotton Pressing	7	607
Ginning and Pressing	4	320
Miscellaneous	118	3,755
Total ...	292	12,993
Miscellaneous:		
Miscellaneous	6	75
Total ...	6	75
Total Seasonal * ...	343	17,504
Total Perennial * ...	3,761	259,082
	3,761	276,586

* Includes 88 Government and Local Fund factories and 23,390 workers employed in them.

Output and Value of Manufactured Goods.

Collection of statistics of industrial output has been commenced only recently. According to the census of manufacturing industries, 1946, output figures are available for sugar, cotton textiles—yarn and piecegoods, tanned skins, soap, vegetable oils, oil cakes, matches, ceramics, plywood and tea-chests. Output under various categories is tabulated below:—

Industrial Production by Categories in the Province of Madras for 1946.
(*According to the Census of Manufacturing Industries*—1946.)

Products	Unit	Quantity
1. Sugar	Tons	10,936
2. (*a*) Vegetable Oils (Unrefined)	,,	49,339
(*b*) Vegetable Oils (Refined)	,,	2,614
(*c*) Vegetable Oils (Edible Hydrogenated oils)	,,	3,034
3. Oil Cakes	,,	72,224
4. Soap	,,	714
5. (*a*) Tanning (Hides)	Lb.	21,99,839
(*b*) Tanning (Sheep & Goat Skins) (Vegetables & Chrome tanned)	,,	20,94,166
(*c*) Tanning (Semi-Chrome tanned)	,,	65,819
6. Ceramics	Pieces	29,19,000
7. Plywood	Sq. Ft.	22,95,465
8. Tea chests	,,	2,43,012
9. Matches	Gross	41,17,039
10. Cotton Textiles (Yarn)	Lb.	18,43,86,244
11. Cotton Textiles (Woven piecegoods)	Yards	10,13,61,746
12. Cotton Textiles (Woven piecegoods) 100 per cent weft or 100 per cent warp of fibres ther than cotton	,,	1,03,865

The value of services rendered and goods manufactured by 18 groups of industries is estimated to be about Rs. 42 crores in 1946. Of this cotton textiles lead with an output valued at Rs. 30.13 crores. The value of cement produced is about Rs. 1.71 crores, of jute textiles Rs. 1.67 crores and aluminium, copper and brass manufactured Rs. 2.39 crores. The value of the products and the work done by general and electrical engineering is about Rs. 1.6 crores. The value of matches is estimated to be Rs. 1.15 crores. The value of output under various categories of industries is shown in the statement below:—

Statement showing the Value of Industrial Goods in the Madras Province for 1946 (compiled from the First Census of Manufactures, India, 1946).

S. No.	Name of Industry.	*Ex*-factory values of the products and work done by the Industry for customers in 1946.
		Rs.
1.	Distilleries & Breweries	59,91,767
2.	Soap	30,33,651
3.	Tanning	82,47,393
4.	Ceramics	22,38,241
5.	Plywood and Tea Chests	11,48,388
6.	Matches	1,14,96,509
7.	Cotton Textiles	30,13,29,441
8.	General Engineering and Electrical Engineering	1,59,98,726
9.	Biscuits Making	27,99,210
10.	Cement	1,71,12,374
11.	Paper and Paper Board	39,85,360
12.	Glass and Glassware	2,52;786

S. No.	Name of Industry	*ex*-factory values of the products and work done by the Industry for customers in 1946. Rs.
13.	Woollen Textiles	33,22,376
14.	Jute Textiles	1,67,35,712
15.	Chemicals	36,48,859
16.	Aluminium, Copper and Brass	2,38,88,345
17.	Iron and Steel	7,90,489
18.	Producer gas Plants	2,39,056
	Total Value of the above Industrial Goods in the Madras Province as in 1946 ...	42,22,58,683

N.B.—For items 9 to 18, value of industrial goods is estimated for Madras Province from the value given for a group of Provinces.

DEPARTMENT OF INDUSTRIES

Origin and Functions of the Department.

In 1906, a Director of Industrial and Technical Enquiries was appointed to make a survey of the industries which existed then and to investigate the possibility of setting up new industries. The Industrial Conference held at Ootacamund in 1908 resolved that a permanent Department should be created. A Department of Industries was sanctioned in March 1914 and an Advisory Board of Industries was constituted in November 1920. The latter was replaced in 1923 by a Statutory Board of Industries, created under the State Aid to Industries Act passed in 1922.

The activities of the Department are: (1) General assistance and supply of statistics and other information useful to commerce and industry, (2) Experiments in new industries and industrial processes, (3) Management of model industries, (4) Assistance to agriculturists

(mainly through the Pumping and Boring sections), (5) Assistance to Cottage Industries and (6) Industrial Education.

Bureau of Industrial and Commercial Information.

The Bureau of Industrial and Commercial Information, the intelligence branch of the Department was founded as a result of the Industrial Conference held at Ootacamund in 1908. The purpose of the bureau is to provide information on general industrial and commercial subjects in connection with existing industries and of projected developments of industries in the Presidency. Among the measures taken to assist individuals or firms anxious to start new industries or extend and improve their business connections may be mentioned: (1) Furnishing information regarding new processes of manufacture, use of machines, markets for goods and sources of supply of materials and commodities, prices and openings for Capital, (2) indicating the possible source of raw materials and their suitability to various purposes and (3) assisting to find markets for the finished products by placing manufacturers in touch with consumers. The Bureau is also responsible for the collection, compilation and distribution of statistics relating to commerce and industries.

Fostering of New Industries.

Among the industries which have formed the subject of experiment, the following are the most important: (1) the aluminium industry, (2) chrome tanning, (3) weaving, (4) pencil manufacture, (5) preservation of fruits, (6) glue manufacture, (7) sugarcane crushing and (8) soap making.

Chemical Laboratory.

There is a chemical laboratory under the department and chemists have been appointed for schemes of investigation of minerals, alkaline earth deposits in the Province and manufacture of caustic soda.

Among the minerals worked were magnesite, mica, barytes, bauxite, gypsum, china clay, phosphatic nodules, limestone, etc.

Industrial Schools.

Government Industrial Schools are located at Mathurai, Bellary and Kozhikode, the Government School of Technology in Madras, the Branch School at Perambur and the Trade School at Mangalore. The strength of these schools was 505 in 1947-48.

Seven Polytechnics are also functioning in the Province; a detailed scheme for the expansion of the Government School of Technology into a Central Polytechnic has been sanctioned, under which 3-year courses in Ciivl, Electrical, Mechanical, Sanitary and Sound Engineering, Printing and Fisheries Technology and Navigation have been introduced. The total strength of the Polytechnics was 1,155 in 1947-48. Under the Department, are working an Institute of Leather Technology, a Government Textile Institute and a School of Arts and Crafts at Madras, Government Coir School at Beypore, Pottery Training Centres at Rajahmundry, Cuddapah and Harpanahalli and a Glass Training Centre at Kalahasti. There were 374 pupils in these Institutes during 1947-48. Twelve Government scholarships tenable for 5 years are given and seven scholarships by the Commissioner of Labour to students belonging to Scheduled Castes. In addition to these Government institutions, there are 82 recognised aided industrial schools in the Province with a strength of about 3,600 pupils.

Industrial Engineering Workshops.

An Assistant Industrial Engineer is in charge of the Workshops at Washermanpet. In 1947-48, in addition to regular work, five Pinto Chekkus and 5 borewell pumps were also manufactured in the work-

shops, and two chekkus were pending completion at the end of the yeai

Pumping and Boring Sections

The Department maintained 14 Armstrong Power Drills, seven Rustom Bueyrus Diesel Oil Engine Drills, 176 hand boring sets and an Air Compressor Drill. The total number of borings put down was 1,182, the total footage bored 57,623 feet and 10 inches. Four artesian springs and 16 sub-artesian springs were tapped. The Department maintained 26 pump-sets for hiring out to ryots for irrigation and for well sinking purposes.

Museums.

To popularise the products of cottage industries and provide a channel for their marketing, the Department has organized sales emporia attached to the District Industrial and Commercial Museums at 20 centres in the Province.

Government Industrial Units.

The Industrial Concerns under the control of the Department are: (1) the Kerala Soap Institute at Kozhikode, (2) the Government Oil Factory at Kozhikode, (3) the Government Silk Filatures at Kollegal, (4) the Coir Factory at Beypore, and (5) handmade paper units at Vijayawada, Bugga and Gazulapally. The first two are run on strictly commercial lines and the rest are State Trading Schemes.

In 1947-48, the Kerala Soap Institute produced 660 tons of household toilet, industrial and medicated soaps and made a profit of Rs. 2,10,063. The Government Oil Factory produced 119,567 lb. of all oils, Government Silk Filatures, 43,340 lb. of raw silk and the handmade paper units 18,765 lb. of paper and 6,662 lb. of box boards

Sericulture.

The total area under mulberry was 21,633 acres in 1947-48, and the ban on the extension of mulberry cultivation has been lifted.

Cottage Industries.

A scheme for the development of village industries in selected firkas has been sanctioned as part of the Firka Development Programme and the establishment of about 200 training and demonstration units has been provided for. The Instructors, Demonstrators, etc., recruited for the administration of the scheme, were given training in the Central Polytechnic, the School of Arts and Crafts, the Institute of Leather Technology, etc. In 1947-48, thirty-nine demonstration and training units in different trades were functioning and 482 pupils were under training in trades such as blacksmithy, woodwork, pottery, tanning, light metal casting, rattan and bamboo, toys and lacquer work, boat building and handmade paper. Sales emporia for marketing cottage industry products are organized throughout the Province.

Controlled Commodities.

The Department is in charge of controls relating to scarce materials like iron, steel, coal and paper. Allotments for 21,000 tons of iron and steel, of 100,000 tons of coal for flue-curing and 10,596 tons of paper were made to this Province in 1947-48. The paper actually supplied was only 5,140 tons and iron and steel only 12,832 tons.

Industrial Planning.

The Department has collected all available information regarding supply of raw materials, production of and estimated demand for finished goods, size of economic units with capital requirements and choice of places for new industries with due regard to proximity to

sources of raw materials, markets, water, power, etc. This is intended to serve as the ground work for industrial planning.

THE STATE AID TO INDUSTRIES ACT, 1922.

Objects.

The Madras State Aid to Industries Act was passed in 1922. The scope of the Act was at first very limited. In the subsequent years, it was amended several times to suit the needs of industrial development of this Province.

This Act provides for granting aid to any industrial enterprise with an important bearing on the economic development of the country, viz.: —

(1) New or nascent industries;

(2) Industries newly introduced in areas where they were undeveloped ;

(3) Cottage industries ; and

(4) Old and established industries.

The forms of financial assistance that could be given are (*a*) loans, (*b*) guarantee of cash credit, overdraft or fixed advance with a bank, (*c*) subsidies, (*d*) subscription of shares and debentures and (*e*) guarantee of a minimum return in the case of a Joint-Stock Company. Other forms of assistance that could be given under the Act consists of grant, on favourable terms, of land, raw material, firewood and water and supply of electricity at concessional rates from Government sources.

Board of Industries.

The Statutory Board of Industries created under the Act, consists of both official and non-official members with a strength of not less than ten and not more than twelve. Provision is made in the consti

tution of the Board for the representation of the Madras Chamber of Commerce and Southern India Chamber of Commerce, Madras Trades Association and the Madras Legislative Assembly. All the applications for State aid are first scrutinised by the Board. No application rejected by an unanimous resolution could be granted aid.

Aid Granted.

Between 26th March 1924 when the Board of Industries met for the first time and September 1949—in a period of 25 years—it has met 54 times and considered about 400 applications. The total amount of financial aid applied for was Rs. 321.65 lakhs, the amount recommended Rs. 112.42 lakhs and the amount sanctioned Rs. 63.47 lakhs. Out of 145 applicatitons recommended, 87 were sanctioned, the others were rejected either by the Government or were withdrawn by the applicants themselves. Up to the end of 1946-47 the aid granted was comparatively low but since then notable as the following figures will show:—

Extent of Aid under State Aid to Industries Act.

Period	No.	Aid applied for Amount Rs. in lakhs.	Aid recommended by the Board of Industries		Aid sanctioned by the Government.	
			No.	Amount Rs. in lakhs.	No.	Amount. Rs. in lakhs
1923-24 to 1946-47	273	99.36	91	30.56	51	12.92
1947-48	34	40.41	13	16.06	11	15.69
1948-49	75	142.31	31	43.53	22	33.64
1949-50 upto September	18	39.57	10	22.27	3	1.22
Total	400	321.65	145	112.42	87	63.47

Types of Industries Aided.

In the last 25 years, numerous industries, large and small, have applied for state aid and of these a variety of industries have secured aid, the most important being Tile, Match, Sugar, Silk, Oil mill, Saw mill, Toy, Cotton mill, Chemical Works, Fountain Pen, Electrical goods, Metal, Medicines and medical goods, Soap and Agricultural implements. The aid given was mainly in the form of loans and repayable subsidies which amounted to Rs. 60.39 lakhs out of Rs. 63.47 lakhs or 95 per cent. The other forms of aid consisting of shares (Rs. 2.25 lakhs) non-repayable subsidies (Rs. 0.05 lakhs) and overdraft of (Rs. 0.78 lakhs) formed in the aggregate only 5 per cent.

Financial Results.

In spite of the safeguards provided in the Act, the Government incurred some losses to the extent of Rs. 2.54 lakhs in granting the loans, as four concerns failed and the amount had to be written off in part or whole. The loss, amounting to Rs. 2.49 lakhs incurred in 1930 in the case of the Carnatic Paper Mills to which a loan of Rs. 6.49 lakhs was given in 1925 was the heaviest. But the total losses incurred by the Government constitute less than 4 per cent of the total loans given and with the greater control now exercised over the aided concerns, the losses may be practically eliminated.

Industrial Investment Corporation.

The State Aid to Industries Act has not been of much help in the case of big industrial concerns or small scale industries. To meet the demand of the former, the Madras Industrial Investment Corporation has been created recently with a capital of Rs. 2 crores of which 51 per cent is contributed by the Government. Shares of two fertiliser factories one in Travancore and the other at Sindhri have been subscribed to the tune of Rs. 40 lakhs and Rs. 25 lakhs respectively by the Government.

To help the Cottage Industries, the Director of Industries has been permitted to grant them aid up to Rs. 500 on his own authority under simplified rules which dispense with the approval of the Board or of the Government.

New Industrial Undertakings.

In the spheres of banking, loan and insurance, transit and transport, trade and manufacture, mills and presses, tea and other Planting Companies, 544 companies were registered in 1947-48 of which 3 were without share capital. The authorised share capital of the rest was Rs. 26,40,73,100 and the subscribed capital was Rs. 1,53,44,427.

Cost of Administrative Services.

The cost of Administrative and Technical Staff from 1946-47 is given below:—

	1946-47 Rs. lakhs	1947-48 Rs. lakhs	1948-49 Rs. lakhs	1949-50 Rs. lakhs
Pay of Officers	2.88	3,45	3.53	4.21
Pay of Establishments	10.60	14.45	13.70	20.01
Allowances:				
Officers	7.26	8.52	1.36	1.65
Establishments	...	...	7.83	10.76
Total ...	20.74	26.42	26.42	36.63

Expenditure on Industries Department.

Expenditure on Industries in this Province has risen from Rs. 27.54 lakhs in 1938-39 to Rs. 256.07 lakhs in 1949-50. From As. 0-11, the per capita expenditure has risen to As. 7-7 in this period. There has been more than eight fold rise; it is about two-thirds of that in West Bengal which incurs the highest per capita expenditure in India.

VI. COMMUNICATIONS.

Roads and Railways.

The Public Works Department had been in charge of all public works including roads until 1st April 1946 when a separate Highways Department under a Chief Engineer was constituted.

Roads in this Province are divided into National Highways, District roads and village roads. Under the Post-War Reconstruction Programme, there are schemes for vast extension of roadways. The actual and projected mileage in each class are shown below:—

Class	Present milleage	Proposed mileage
National Highways	2,784	2,981
Other important Provincial routes	1,825	2,177
Major District Roads	14,700	16,356
Major District and Village Roads	17,360	35,363
Total ...	36,669	56,877

The length of metalled and unmetalled roads maintained by the Public Works Department, Municipalities, District and Local Boards is shown below:—

Class	Metalled Miles	Unmetalled Miles.	Total Miles
P.W.D.	2,847	895	3,742
Municipalities including cantonments, notified areas and townships	2,414	1,066	3,480
District and Local Boards	20,833	13,053	33,886
Total ...	26,094	15,014	41.108

There are 32.50 miles of road per 100 sq. miles in this Province, compared with 25.92 miles in undivided India. This Province has 4,626 miles of railways or 3.66 miles per 100 square miles against 3.7 miles for undivided India.

Cost of Administrative Services.

The cost of the administrative and technical personnel including the units in charge of Civil Works is given below: —

(in lakhs of Rs.)

	1946.47	1947-48	1948-49	1949-50
Pay of Officers	19.62	22.26	21.85	22.80
Pay of Establishments	37.28	45.86	49.43	52.03
Allowances and Honoraria: —				
Officers	29.51	34.77	10.59	10.79
Establishments	...	...	28.09	28.55
Total ...	86.41	102.89	109.96	114.17

Expenditure on Civil Works.

Expenditure on Civil Works in this Province has risen from Rs. 119.70 lakhs in 1938-39 to Rs. 715.43 lakhs in 1949-50. From Re. 0-4-0 in the former year, the per capita expenditure has risen to Rs. 1-5-3 in the latter year. There has been more than five fold rise, but it is only about half of that in Orissa which incurs the highest per capita expenditure in India.

Post Offices.

The number of post-offices—urban and rural—in the Province of Madras with areas and population served by each are tabulated with corresponding figures for British India (1947) for comparison:—

Description	*Madras*	*British India.*
Number of Post Offices	5,236	26,130
(*a*) Urban	948	3,511
(*b*) Rural	4,288	23,619
Letter Boxes	12,131	56,996
Area covered by one Post Office in sq. miles	47.8	52
Area covered by one Letter Box	20.6	27
Population served by one Post Office	10,079	14,627
Populatiton served by one Letter Box	4,345	6,706
Rural Delivery staff *	3,059	19,088

Transport of Mails.

Various means of transport are utilised to transport mails from places of origin to those of destination, e.g., railways, motors, steamers, air, runners, etc. The mileage covered by the various methods of transport is shown below:—

Methods of Transport	*Madras*	*British India*
1. Railways	6,280	40,200
2. Motor Service	7,555	30,689
3. Runners	14,525	85,305
4. Mail Carts, horses, camels, etc.	123	4,322
5. Steamer Service, sea and river boats	18	6,362
Total ...	28,501	166,878

* Apart from distribution of mails by the staff of post offices, rural delivery staff is appointed to facilitate the work in rural areas.

GOVERNMENT BUS TRANSPORT IN MADRAS CITY.

/Although a batch of six Government buses had been introduced as early as the 24th March 1947, the formal inauguration of the Government Bus Transport took place only on the 15th October 1947. From that date whenever Government put additional buses into operation, private operators began to withdraw an equal number. In the next month and a half about 100 private buses were replaced by Government buses. Gradually the number of Govrenment buses increased and the fleet strength reached 320 towards the end of 1948. This fleet includes 25 deisel vehicles costing about Rs. 45,000 each. The total investment on vehicles amounts to Rs. 53.74 lakhs./

An extensive site with some buildings in the Bodyguard Lines, Mount Road, has been secured at a cost of about Rs. 1.5 lakhs for garaging the Government Buses.

/The Commissioner of Transport is in general charge and the Deputy Commissioner of Transport in immediate charge of the Government Bus Service. The latter is assisted by a Transport Officer and 2 Deputy Transport Officers, two engineers, an Accounts Officer and an Assistant Secretary./

The traffic staff (31st December 1948) consists of 3 Traffic Managers, 659 drivers, 707 conductors, 97 checking inspectors and 98 time keepers.

The revenues are derived from fares collected by buses plying in normal routes and by buses chartered for excursions, etc. The fare for the first fare-stop roughly one mile is one anna and for every subsequent mile 6 pies. The Governmnt Bus Transport has an average monthly revenue of Rs. 6.81 lakhs and carries daily more than 2 lakhs of passengers with daily earnings exceeding Rs. 22,000.

There are 36 different bus routes within the city and in its environs covering suburbs like Pallavaram, Tiruvottiyur, Alandur, Villivakkam, Ayyanavaram and Agaram with a total route mileage of

about 175 miles. From important residential areas like Theagarayanagar, Mylapore and Triplicane, bus routes radiate to various busy parts of the City. Buses run in all routes from 5-30 a.m. to 10-30 p.m. The timings are so staggered to make available a larger number of buses to the public during peak hours.

Government buses ply every day between Madras and Tirupati *via* Kalahasti. Excursion Buses to Tirukkalukunram and Mahabalipuram are run on Sundays. The public and private institutions make use of the Government buses for excursions and educational visits.

The Government Bus Service has 3 auxiliary institutions—the Government Automobile Workshop, the Government Coach Building Factory and the Central Stores.

Vehicles of all the Departments of Government are sent to the Automobile Workshop for repair and in the year ending March 1949, 485 major and 1,492 minor repairs had been undertaken. Of the major repiar work, the vehicles of the Government Bus Service accounted for 75 per cent. The amount of stores utilised was Rs. 1.91 lakhs. The total investment on the Government Automobile Workshop was Rs. 2.98 lakhs, (31st March 1949).

The Government Coach Building Factory has been set up to build coaches for the Government Bus Service as also vans, lorries, etc., for other departments of Government. The total investment on machines, tools and plant (31st March 1949) for this factory amounted to Rs. 76,000. The value of materials purchased in 1948-49 was about Rs. 3.54 lakhs and the net profit earned by the factory was Rs. 2.07 lakhs.

The Central Stores, originally a small store attached to the Workshop, was reorganised as a separate unit in September 1948 under the immediate charge of a Workshop Engineer. Spare parts are purchased by the Central Stores from authorised stockists. In 1948-49, the stores have supplied spares and accessories valued at Rs. 3.68 lakhs.

VII ELECTRICITY.

Installed Capacity and Production of Power.

At present there are three major Hydro-Electric schemes, Pykara, Mettur and Papanasam and six Thermal schemes, Madras, Vijayawada, Visakhapatnam, Kakinada, Kurnool and Cuddapah with a total of 194,909 K.V.A. of installed plant under the control of the Government. This is supplemented by fifteen licensees supplying electricity with generating plants having an aggregate installed capacity of 4,385 K.V.A. The total production of electric power in the Province is thus nearly 2 lakhs K.V.A., about 10 per cent of that in India. There are more than 6,700 miles of transmission lines and in 1948-49, 576 million units of energy were generated and distributed to nearly 2,18,000 consumers. The statement below gives the installed capacity and the production of electricity by the various systems.

Installed Capacity and Production of Electricity (1948-49).

Name of the System	Installed capacity K.V.A.	Power generated in million units. K.W.H.
Hydro-Electric:		
Pykara	48,430	208.20
Mettur	50,000	156.80
Papanasam	21,750	71.77
Total Hydro-Electric ...	120,180	436.77

Name of the System	Installed capacity K.V.A.	Power generated in million units. K.W.H.
Thermal:		
Madras	60,000	102.07
Visakhapatnam	4,688	10.68
Vijayawada	7,500	17.30
Kakinada	1,169	1.89
Kurnool	771	0.56 *
Cuddapah	601	0.13
Total Thermal ...	74,729	132.63
Total Government ...	194,909	569.40
15 Licensees ...	4,385	6.73
GRAND TOAL ...	199,294	576.13

Distribution.

Although the generation of power is practically nationalised, the distribution of power is not. The Government distributed only about 70 per cent of the power produced, the balance being distributed through licensees. Only 31 per cent of the total number of consumers are served directly by the Electricity Department of the Government and the rest by 90 licensees. The following statement gives the distribution of the consumers under the different systems:—

* From 18—11—1948 to 31—3—1949.

Distribution of Consumers under the different systems.

Name of the System	No. of Consumers: Served by Electricity Department	Served through distributed licensees in Government area	Total
Hydro-Electric:			
Pykara	14,766	27,706	42,472
Mettur	15,615	67,892	83,507
Papanasam	7,209	29,315	36,524
Total Hydro-Electric ...	37,590	124,913	162,503
Madras	25,455	1,283	26,738
Visakhapatnam	1,888	2,933	4,821
Vijayawada	977	8,805	9,782
Kakinada	877	1,554	2,431
Kurnool	913	...	913
Total Thermal ...	30,110	14,575	44,685
Total Hydro-Electric ...	37,590	124,913	162,503
Total Thermal ...	30,110	14,575	44,685
Total Government ...	67,700	139,488	207,188
Other Licensees ...	...	...	10,580
GRAND TOTAL ...	67,700	139,488	217,768
Percentage of consumers served directly by Government			31.09
Percentage of consumers served by Licensees			68.91

Consumption.

The total demand for electricity from Government undertakings was 121,975 K.W. in 1948-49 against 569.40 million units generated. The per capita consumption of electricity works out to about 10 units almost the same as for All-India but far below the consumption of 1,670 units in U.S.A. and 790 units in U.K. The per capita consumption in Madras is less than a quarter of 44 units consumed per head in the adjacent State of Mysore. The distribution and consumption among various uses is shown below. Industries consume 56 per cent while irrigation and agriculture only 12 per cent:—

Distribution and Use of Power Generated.

Use	Percentage of power consumed
1. Industries	56
2. Irrigation and Agriculture	12
3. Domestic heat, power lights and fans	11
4. Commercial heat, power, lights & fans	10
5. Public lighting	3
6. Traction	4
7. Miscellaneous	4
	100

Rural Electrification.

Special attention is paid to rural electrification under the Firka Development and the Grow More Food Schemes. More than 1,500 villages or about 6 per cent of the total number of villages have been electrified. Top priority is given to agricultural purposes. About 2,300 pumpsets were connected in 1948-49 bringing the total number of pumpsets now working to about 12,000.

Revenue from Electricity Schemes.

The total capital invested in all the schemes up to the end of 1948-49 was nearly Rs. 13 crores, the gross revenue Rs. 2.68 crores and the net revenue Rs. 1.02 crore. The capital outlay and net revenue of the various Government Schemes are given below:—

Capital Outlay and Revenue of Government Undertakings.

Name of Government System	Year of operation	Total capital Outlay	Gross revenue	Working expenses	Net revenue
			Rs. in lakhs		
Hydro Electric					
Pykara	Sixteenth	410.29	162.98	72.62	90.36
Mettur	Twelfth	325.75			
	Fifth	248.18			
		984.22			
Thermal					
Madras	Second	*163.73	105.07	93.39	11.68
Cuddapah	First	% 2.52			
Visakhapatnam	Tenth	42.95			
Vijayawada	Tenth	66.11			
Kakinada	Ninth	8.98			
Kurnool	Second	@ 1.60			
		285.89			
Grand Total		1,270.11	268.05	166.01	102.04

* Tentative subject to modification after valuation of M.E.S.C, under. taking.

% Tentative subject to modification after final settlement of purchase price.

@ Tentative as it does not include the purchase price for the undertaking payable to the muncipality which is not finally settled.

Nationalisation.

With the acquisition of the Madras Electric Supply Corporation on 28th August 1947, the generation of electricity in the Province is almost nationalised, the share of the Government being nearly 99 per cent and that of the other licensees only 1 per cent. With a view to secure proper co-ordination and development especially in rural areas, the Government have recently passed a bill providing for the acquisition of the electric undertakings run by the licensees and it may be expected that in a short period, nationalisation of the entire electric system will be an accomplished fact.

Programme of Expansion.

The total cost of the main schemes under the Post-War Plan was originally estimated at Rs. 12 crores but the revised estimate is nearly Rs. 50 crores; when completed they are expected to instal an additional capacity of nearly 200,000 K.W. and add 1,200 more miles of high tension lines to the grid. The schemes will be completed by 1953 and the power resources of the province will be doubled. Details of the main schemes of the Post-War Reconstruction Plan are shown below:—

Major Post-War Schemes.

Name of Scheme.	Estimated cost Rs. in lakhs.	Plant capacity K. W.	Probable date of completion.	Remarks.
1 Machkund Hydro-Electric Scheme	1,318	70,000*	1953–54	†Represents share of the Madras Government out of a total capacity of 100,000 K. W.
2 Tungabhadra Hydro-Thermal Scheme	565	7,000	1954	
3 Ceded Districts Scheme	50	4,000	1950–51	Hydro - electric power is proposed to be purchased from Mysore Jog Falls.
4 Nellore Thermal Scheme	101	5,000	1949	

	Name of Scheme.	Estimated cost Rs. in lakhs.	Plant capacity K. W.	Probable date of completion.	Remarks.
5	Madras Plant extension	621	30,000	1951	
6	Madras Mettur inter-connection Scheme	218		1951	Intended to connect Madras with the Hydro-electric systems of the South.
7	Pykara plant extension and Moyar Hydro Electric Scheme	953	63,000	1953 1950–51	
8	Papanasam Second Stage extensions including Mathurai Thermal Scheme	179	19,000	1950–51	
9	Miscellaneous extension lines such as Erode-Salem, Erode-Tiruchirapalli-Dalmiapuram-Mathurai-Tirumangalam-Rajapalayam-Tanjore-Mayavaram-Chidambram-Papanasam-TirunelveliKayattar-West Godavari, Negamam-Pollachi and Gudivada-Pamaru-Vuyyur.	418		1952	Intended to convey the power developed to the interior parts.
10	Hindupur Kollegal and Cuddapah Scheme	155		1952	The existing licensed undertaking will be acquired when supply improves.

For the Andhra area, power in abundance to the extent of 200,000 K.W. equivalent to the power under all Post-War Reconstruction schemes will be available from the Ramapadasagar Project alone. Negotiations are in progress with the Mysore Government for the development of the Mekadatu falls in the Cauvery river. Demands in the southern districts and Malabar can be met by developing the available power sites in the Nilgiris and Palani Hills. The Periyar waters now used solely for irrigation will be harnessed and made to yield a good block of power and these will be exploited in consultation with the United States of Travancore and Cochin. The question of setting up a semi-autonomous Electricity Board, as provided for in the Electricity Supply Act of the Government of India, is also under the consideration of the Government.

The Madras Grid.

A master power plan has been envisaged in the form of an electric grid covering the whole Province. A grid is already in formation, now in three zones, the southern area fed by the inter-connected hydro-electric power houses at Pykara, Mettur and Papanasam, the Madras area with its Basin Bridge Thermal Station and the Andhra area fed by the thermal stations at Visakhapatnam, Kakinada and Vijayawada. The ultimate objective is to get these inter-linked and to have a single grid covering the entire Province deriving power from every available source, hydro or thermal and feeding every village and hamlet.

Cost of Administrative Services.

The cost of administrative and technical personnel in the years from 1946-47 to 1949-50 is tabulated below:—

	1946-47	1947-48	1948-49	1949-50
Pay of Officers	2.74	4.04	5.19	5.52
Pay of Establishments	6.82	9.76	11.53	11.50
Allowances & Honoraria:—				
Officers	4.84	6.07	1.78	1.92
Establishments	...	...	5.87	5.85
Total ...	14.40	19.87	24.37	24.79

Expenditure on Electricity Schemes.

Expenditure on Electricity schemes in this Province has risen from Rs. 18.92 lakhs in 1938-39 to Rs. 93.38 lakhs in 1949-50. From Re. 0-0-8 in the former year the per capita expenditure has risen to Re. 0-2-9 in the latter year.

VIII. CO-OPERATION.

Co-operation has made steady progress in this Province in all spheres with respect to number of societies, membership, paid-up and working capital.

Progress of Co-operation in Madras Province.

At the end of year.	Number of Societies.	Number of financing Banks.	Number of Supervising Unions.	Number of members in all Societies	Paid-up Capital Rs. in lakhs	Working Capital Rs. in lakhs.	Reserve Fund Rs. in lakhs.
1908-09	180	3	—	15,597	2.9	18.19	0.53
1918-19	3,676	26	102	244,297	34.70	305.21	14.65
1929-30	15,238	32	405	974,999	233.68	1,799.36	98.51
1938-39	13,275	32	263	1,041,355	246.84	2,270.91	194.31
1947-48	18,356	32	268	2,538,272	807.08	5,660.33	434.33

In the last 10 years, the total number of societies has risen from 12,739 in 1937-38 to 18,356 in 1947-48 or by 44.09 per cent, the number of members of all societies from 9,48,724 to 25,38,272 or by 167.55 per cent, paid-up capital from Rs. 235.35 lakhs to Rs. 807.08 lakhs or by 242.93 per cent, working capital from Rs. 2,005.65 lakhs to Rs. 5,660.33 lakhs or by 182.22 per cent and reserve fund from Rs. 179.86 lakhs to Rs. 434.33 lakhs or by 141.48 per cent.

The Apex Bank.

The Madras Provincial Co-operative Bank—the apex bank—has also in the last decade reigstered a steady expansion of its activities. Although the number of individual members declined from 184 to 167, and the number of member societies has remained stationary at 32, the paid-up share capital has increased from Rs. 6.55 lakhs to Rs. 8.99 lakhs, deposits from members from Rs. 142.13 lakhs to Rs. 278.43 lakhs, loans and deposits from societies from Rs. 60.03 lakhs to Rs. 182.11 lakhs, the reserve fund from Rs. 17.50 lakhs to Rs. 35.00 lakhs, working capital from Rs. 236.45 lakhs to Rs. 618.15 lakhs, loans issued from Rs. 88.24 lakhs to Rs. 453.31 lakhs and net profit from Rs. 2.36 lakhs to Rs. 4.61 lakhs.

Credit Institutions.

Land Mortgage Banks.—It was beyond the competence of rural credit societies to grant long-term loans to their members even for legitimate purposes like the improvement of land and clearance of prior debts. Government scrutinised the proposals for organising land mortgage banks on the Punjab model submitted by the Registrar and approved them in 1925 and a few banks were organised as an experimental measure. The movement gained strength from year to year. The number of land mortgage banks increased from 2 in 1925 to 37 in 1930-31. They floated debentures for raising funds which ended in acute competition among them. In 1929, to eliminate this suicidal competition the Central Land Mortgage Bank was constituted with the object of financing the primary banks through floating of debentures.

This Central Institution has recorded steady progress. The number of primary Land Mortgage Banks has increased to 120 in 1947-48. The progress made by the Central and Primary Land Mortgage Banks may be seen from the following statement:—

Land Mortgage Banks.

	Central 1938-39	Central 1947-48	Primary 1938-39	Primary 1947-48
Number	1	1	110	120
Members	572	625	47,153	97,969
Paid-up Share Capital (Rs. in lakhs)	7.77	11.94	13.41	24.21
Deposits from members & non-members (Rs. in lakhs)	169.66	377.01	2.67	N.A.
Loans & deposits from Societies & Government (Rs. in lakhs)	23.84	10.40	189.50	291.63
Reserve Fund ,,	1.76	17.29	1.46	6.48
Working Capital ,,	204.39	421.73	207.49	323.31
Loans issued during the year (Rs. in lakhs)	58.53	61.58	59.43	62.33
Loans outstanding during the year (Rs. in lakhs)	189.18	299.12	192.58	300.71
Net profit ,,	1.13	2.34	1.01	1.14

N.B.—N.A. = Not available.

Credit Societies.

Agricultural and Non-agricultural.—There are 12,056 agricultural credit societies with 84,368 members, a paid-up share capital of Rs. 98.47 lakhs, a reserve fund of Rs. 97.00 lakhs and a working capital of Rs. 722.64 lakhs. The number of non-agricultural credit societies is 1,138 with 393, 269 members, a paid-up share capital of Rs. 131.43 lakhs and a working capital of Rs. 772.93 lakhs. There are 30 Central Banks with 4,122 individual members, 15,317 member societies and a working capital of Rs. 1406.96 lakhs.

Financial position of Co-operative Credit Institutions (1947-48).

Description	Central Banks.	Agricultural Credit Societies.	Madras Central Land Mortgage Banks	Primary Land Mortgage Banks	Non-Agricultural Credit Societies.
Number of societies	30	12,056	1	120	1,138
Number of members (individual)	4,122	843,680	505	97,969	393,269
Number of members (societies)	15,317	...	120	...	...
Paid-up Share Capital (Rs. in lakhs)	91.86	98.47	11.94	24.21	131.43
Reserve Fund ,,	47.79	97.00	17.29	6.48	53.21
Deposits from members and non-members (Rs. in lakhs)	490.29	45.41	377.01	...	548.99
Loans and deposits from societies (Rs. in lakhs)	746.83	441.88	10.40	291.63	119.64
Loans from Government (Rs. in lakhs)	...	3.42	...	...	...
Other Funds ,,	30.21	36.44	5.09	0.98	19.66
Working Capital (Rs. in lakhs)	1406.96	722.64	421.73	323.31	772.93
Loans issued during the year (Rs. in lakhs)	3351.31	440.01	61.58	62.33	670.50
Loans repaid during the year (Rs. in lakhs)	3318.18	313.59	27.57	25.79	548.34
Loans outstanding during the year (Rs. in lakhs)	987.56	555.94	299.12	300.71	566.53
Net profit ,,	11.81	9.09	2.34	1.14	9.89

Co-operative Stores.—The growth of the Co-operative Stores movement has been striking since the establishment of food and other controls in 1942-43. Their number, paid-up capital, value of purchases and sales and net profits as in 1942-43 and 1947-48 are shown below:—

Retail Co-operative Stores (Exclusive of School and College Stores).

	1942-43	1947-48	Increase in Percentage
Number of Stores	938	1,740	85.50
Number of branches of depots	228	1,474	546.49
Number of members (in lakhs)	2.13	5.59	162.44
Paid-up share capital (Rs. in lakhs)	23.85	105.15	340.88
Reserve Fund (Rs. in lakhs)	3.35	42.49	1,168.36
Borrowings, Outstandings:			
(a) from Central Banks (Rs. in lakhs)	11.49	53.55	366.06
(*b*) from others (Rs. in lakhs)	25.02	27.03	8.03
Working Capital (Rs. in lakhs)	63.71	228.52	258.68
Purchases (Rs. in lakhs)	315.75	1863.36	490.13
Sales (Rs. in lakhs)	298.49	2353.76	688.56
Gross profits (Rs. in lakhs)	21.30	91.73	330.66
Net Profits † (Rs. in lakhs)	19.31*	29.88	54.74
Net Loss ‡ (Rs. in lakhs)	0.32	1.60	400.00

* Refers to 1943-44.

† Relates to Societies which worked at profit.

‡ Relates to Societies which worked at loss.

School and College Stores. ......

The spread of the stores movement among students and teachers in recent years is an interesting feature. The number of School and College Students' Stores has risen from 94 in 1938-39 to 279 in 1947-48, the number of student and teacher members from 5,564 to 22,836 or nearly four fold and associate members from 10,251 to 30,380 or three fold. The paid-up share capital has risen from Rs. 13,922 to Rs. 57,173, value of books sold from Rs. 1.73 lakhs to Rs. 10.23 lakhs and savings effected for members from Rs. 7,000 to Rs. 18,077.

District Co-operative Wholesale Stores.

The number of District Co-operative Wholesale Stores has made an equally notable progress. The number of District Co-operative Wholesale Stores has risen from 2 in 1939-40 to 22 in 1947-48. The expansion of their activities since 1942-43 is shown below:—

Wholesale Co-operative Stores.

	1942-43	1947-48	Increase in Percentage
Number of Stores	21	22	4.76
Number of members	4,841	10,694	120.91
Paid-up share capital (Rs. in lakhs)	7.60	34.53	354.34
Reserve Fund (Rs. in lakhs)	0.13	24.76	1804.62
Borrowings, Outstandings:			
(a) from Central Banks	52.16	189.28	262.88
(b) from others ,,	0.47	10.12	2053.19
Working Capital ,,	60.36	258.69	328.58
Purchases ,,	96.36	1391.22	1343.77
Sales ,,	80.05	1627.59	1933.22
Gross profits ,,	3.53	60.01	1600.00
Net profits ,,	N.A.	25.61	...

Producers' Co-operatives.

Weavers' Societies.—Of the Producers' Co-operative Societies, the Weavers' Co-operative Societies have made great strides. The number of societies has increased from 174 in 1938-39 to 893 in 1947-48, and the number of members from 19,676 (in 1941-42) to 132,968, thus bringing within the Co-operative fold one in every four weavers in the Province. The paid-up capital has increased from Rs. 1.27 lakhs in 1939-40 to Rs. 62.20 lakhs in 1947-48. The value of cloth sold rose from Rs. 7.37 lakhs in 1938-39 to Rs. 814.15 lakhs and the net profit from Rs. 0.16 lakhs to Rs. 33.42 lakhs in 1947-48. They have built up a Reserve Fund to the tune of Rs. 50.37 lakhs. The societies have under their control 133,199 looms.

Co-operative Dairying.

The number of Milk Supply Unions has gradually risen from 6 in 1938-39 to 23 in 1947-48 and that of milk supply societies from 51 to 354. The growth in the number of members, unions and societies and the rise in the paid-up share capital, value of milk sold, etc., in the last decade is shown below: —

	1938-39	1947-48
1. Number of Milk Unions	6	23
2. Number of Milk Supply Societies	51	364
3. Number of Members in 1	53	2,863
4. Number of Members in 2	1,613	29,519
	RS.	RS.
5. Paid-up share capital in 1 & 2	13,000	4,00,000
6. Value of milk sold by societies	2,73,000	59,48,000
7. Value of milk purchased by unions	2,88,000	42,22,000
8. Value of milk sold by unions	3,45,000	48,09,000

Cottage Industries Co-operatives.

Apart from Weavers' Societies, the number of Cottage Industries Co-operative Societies has increased from 68 to 209 in the last decade. In 1947-48, they had 20,365 members and a paid-up capital of Rs. 4.55 lakhs. The value of goods received and sold by them were Rs. 17.45 lakhs and Rs. 21.91 lakhs respectively.

Co-operative Marketing.

Co-operative Marketing could not make much headway in an atmosphere of excessive controls. Some of the sale societies were however entrusted with the procurement of foodgrains. Many undertook supplies of compost, manures, agricultural implements, seeds, and a few, processing like hulling of paddy, decortication of groundnut and ginning of cotton. Storage facilities were provided by 24 societies. The strength and financial position, the value of goods handled, etc., by the societies are given below: —

Sale Societies.

	1938-39	1947-48
Number of societies	134	192
Number of members	27,548	115,483
	(Rs. in lakhs)	
Paid-up share capital	6.58*	18.16
Loans issued during the year	95.86	188.20
Value of stock at the beginning and received during the year	179.05	303.64
Value of produce marketed	45.87	152.85

* In 1942-43.

Scheduled Caste Societies.

In 1947-48, the number of Scheduled Caste Co-operative Societies was 2,103 with 1,12,000 members, a paid-up capital of Rs. 6.28 lakhs, deposits from members of Rs. 87,000, loans from Central Banks of Rs. 6.35 lakhs, from Government of Rs. 2.45 lakhs and a working capital of Rs. 24.09 lakhs. Apart from these exclusive societies, members of the Scheduled Castes are free to join any type of Co-operative Society in their localities; and in 1947-48, 52,000 people belonging to these communities were members in 5,569 other rural credit societies, their contribution in the shape of share capital being Rs. 3.54 lakhs.

There were also 259 societies for Kallars, a backward community found in Ramnad and Mathurai districts, under the Police Department and 51 societies under the Fisheries Department with a total membership of 16,135. In addition to providing credit, most of these societies make joint purchase of domestic requirements of their members. The Societies for Fishermen purchased yarn for making nets and leased inland fisheries. Besides free supervision, Government grant subsidies to these societies to pay remuneration to persons maintaining their accounts. The Harijan Welfare Committee has recommended that Co-operative Housing Societies, Cottage Industries Societies, etc., should be formed exclusively for Harijans; free grants of land should be made to Housing Societies and loans granted from the Harijan Welfare Fund.

Co-operative Insurance.

In the sphere of insurance too, Co-operation has made some advance. Their growth in the last decade may be seen from the following:—

Co-operative Insurance Societies.

	1938-39	1947-48
Number of societies	2	4
Number of members	12,324	36,015
Number of policies at the end of the year	13,718	31,057
	(Rs. in lakhs)	
Amount of risk involved	120.19	1182.69
Premia collected	4.41	19.80
Number of lives insured during the year	3,436	6,083
Number of lives lost	253	82
	(Rs. in lakhs)	
Claims paid	0.89	2.85
Cost of management	1.64	5.89

In almost every sphere of economic activity, co-operative method is being applied. There are at present 16 Fruit Growers' Co-operative Societies, 44 Women's Cottage Industries Societies, 188 Societies for Housing in addition to several societies for labour contract, canteens, restaurants, printing, motor transport, salt licences, education and publishing, rickshaw pullers, workshops, land colonisation, radio sales and services and tailoring. The latter five types have been specially organized for ex-servicemen.

Co-operation in the Province and India.

Co-operation in this Province has made relatively greater progress in the spheres of long-term agricultural credit and non-agricultural societies compared with the whole of India. In the field of short-term

agricultural credit, the number of societies is 13,514 against 146,958 societies in India (including States). For a population which is roughly 1/8 of the Indian population the number of societies is less than one-tenth. The deposit per member is Rs. 4.32 in Madras compared with Rs. 9.88 in India. But in the share capital per member, loans issued per member and loans per capita of the agricultural population, Madras compares favourably with India.

In the development of Land Mortgage Banks, Madras leads with 120 banks out of 284 in India. The number of members is 97,969 against 135,857 in India. Of the total loans of Rs. 58.11 lakhs for India, the loans issued in Madras amount to Rs. 41.18 lakhs or more than two-thirds.

The total number of non-agricultural societies in Madras is 4,722 or about one-fifth of the societies in India. The total share capital is nearly one-third and the loans issued about one-third.* The statement given below shows the comparative position of the Co-operative

Progress of Co-operative Movement in the Madras Province and undivided India.

	Madras Province 1947-48	India (including States) 1945-46
	No.	No.
Total population (estimated)	52,721,000	404,531,000
Agricultural population	37,432,000	287,217,000
Urban Population	8,404,000	51,680,000
Number of villages	35,932	655,892
Number of towns	420	2,703

* This comparison is qualified by the fact that statistics for India relate to 1945-46 while those for Madras to 1947-48.

	Madras Province 1947-48	India (including States) 1945-46
Agricultural societies excluding Land Mortgage Banks:—		
Total number of societies	13,514	146,958
Number of members	1,186,409	5,500,762
Number of societies per 10 villages	3.6	2.24
Number of societies per lakh of agricultural population	36.10	51.17
	RS.	RS.
Total deposits from members and non-members	51,21,865	5,43,25,000
Deposits per member	4.32	9.88
Deposits per capita of agricultural population	0.05503	0.1891
Total share capital	2,44,07,183	5,38,50,000
Share capital per member	20.57	10.70
Share capital per capita of agricultural population	0.652	0.205
Loans issued	6,47,28,208	14,60,29,000
Loans per member	54.56	26.54
Loans per capita of agricultural population	1.73	0.508
Land Mortgage Banks:—		
Total number of societies	120	284
Number of members	97,969	135,857
Number of societies per 1,000 villages	3.34	0.43
Number of societies per million of agricultural population	3.21	0.99

	Madras Province 1947–48	India (including States) 1945–46
	RS.	RS.
Deposits from members & non-members	21,868	2,17,000
Deposits per member	0.233	1.59
Total share capital *plus* Reserve Fund	30,69,029	45,54,000
Share capital *plus* Reserve Fund per member	24.71	33.52
Share capital per capita of Agricultural population	0.065	0.016
Total loans issued during the year	62,32,506	58,11,000
Loans per member	63.62	42.77
Loans per capita of agricultural population	0.1665	0.0202
Total loans outstanding	3,00,71,272	3,34,54,000
Total indebtedness	2,17,71,15,000	9,00,00,000
Percentage of loans outstanding to total indebtedness	1.381	0.426
Non-Agricultural Societies:—		
Total number of societies	4,722	23,838
Total number of members	12,21,842	34,35,452
Number of societies per town	11.24	8.82
Number of societies per lakh of urban population	56.19	46.12
Total deposits from members and non-members	6,02,92,654	2,97,021,000
Deposits per member	49.34	86.46
Deposits per capita of urban population	2.89	5.75
Total share capital	4,26,01,772	11,69,73,000

	Madras Province 1947–48	India (including States) 1945–46
	RS.	RS.
Share capital per member	34.87	34.05
Share capital per capita of urban population	5.07	2.26
Loans issued	6,98,18,232	22,67,18,000
Loans per member	57.14	65.99
Loans per capita of urban population	8.31	4.39

Cost of Administrative Services.

The expenditure incurred on the administrative personnel for four years from 1946-47 is given below:—

	1946-47	1947-48	1948-49	1949-50
		(Rs. in lakhs)		
Pay of Officers	2.28	2.27	2.61	3.33
Pay of Establishments	16.69	20.98	25.09	29.77
Allowances and Honoraria:—				
Officers			1.55	1.98
Establishments	11.71	13.08	16.30	19.08
Total ...	30.68	36.33	45.55	54.16

Expenditure on Co-operation.

Expenditure on Co-operation in this Province has risen from Rs. 13.82 lakhs in 1938-39 to Rs. 61.32 lakhs in 1949-50. From 6 pies in the former year, the per capita expenditure has risen to 22 pies in the latter year, a rise of about 366 per cent. It is however, only about one-third of that in Bombay which incurs the highest per capita expenditure in India.

IX ANIMAL HUSBANDRY.

Origin and Functions.

The department of Animal Husbandry in this Province devotes its attention equally to the improvement of the livestock and the prevention and cure of cattle diseases.

The Madras Veterinary College.

This College admits students for the B.V.Sc. Degree course. In 1947-48, the number of admissions was 85 and scholarships 30 in the first year out of a total of 100 distributed among the students of all classes. About 50 seats are available for Stockmen-Compounders who are given a stipend of Rs. 18 per mensem.

All the students obtain practical training in the hospital and laboratory attached to the College. The number of specimens received in Pathology, Parasitology and Clinical sections of the laboratory attached to the College was 8,258 in 1947-48.

Serum Institute.

A Serum Institute located at Ranipet manufactures various kinds of serum, vaccine and virus.

Production of Serum, Virum and Vaccines in **1947-48.**

Description	1947-48	1946-47
Anti-Rinderpest Serum	383,163 doses.	1,071,600 doses.
Rinderpest Bull Virus	33,200 c.c.	42,524 c.c.
Rinderpest Goat Virus	417,200 c.c.	648,575 c.c.
Haemorrhagic Septicaemia Vaccine	459,760 doses.	421,080 doses.
Black Quarter Vaccine	786,740 ,,	582,269 ,,
Fowl Cholera Serum	985 ,,	645 ,,
Fowl Cholera Vaccine	2,050 ,,	1,850 ,,
Bovine Lymphangitis Vaccine	536 ,,	238 ,,
Sheep pox vaccine	900 ,,	...

In 1947-48, the following sera and vaccines were also purchased and issued:—

Anti-Anthrax	4,780 doses.
Malleiri Sub-cutaneous	33 ,,
Tuberculosis Concentrated	10 ,,
Tuberculosis Avian Concentrated	12 ,,

The Livestock Research Stations.

Government maintain several Livestock Research Stations of which the two at Hosur and Lam (Guntur) are the most important where research is being carried on to improve the following breeds: Kangayam, Scindhis, Hallikar, Thar Parker, Murrah buffaloes, Ongole and others.

Improvement of the breeds of cattle in the Province is undertaken by a livestock improvement scheme, formation of cattle associations, conducting cattle shows and exhibition and maintenance of breeding bulls at stud.

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In 1947-48, under the male stock distribution scheme, 16 bulls (12 Kangayam and 4 Ongole) were purchased and distributed in Mathurai, Coimbatore and Nellore districts. The number of bulls issued from Government Farms was 80 of which 22 were Ongole, 24 Kangayam, 6 Hallikar, 21 Scindhi and 7 Murrah buffaloes. A scheme subsidizing 300 heifer calves for a period of 2 years is continued in Guntur, Nellore, Chittoor, Anantapur, Salem, and Coimbatore districts. Under the Madras City Calf Subsidy Scheme, 1,018 calves were admitted. In addition to Cattle Breeding Associations, 70 cattle shows were held under the auspices of the Department.

Breeding bulls at stud are maintained by Veterinary Institutions, by local boards, co-operative societies and under Premium Scheme. The number of approved bulls in the Province and the services performed are given below:—

	Number.	*Number of Services.*
Bulls	1,122	43,859
Buffalo-bulls	356	17,411
	1,478	61,270

Poultry Research.

Poultry research is undertaken at Hosur, Lam and at the Poultry Research Station, Madras. By selective breeding and feeding it has been possible to improve the eggs quantitatively and qualitatively of the indigenous breeds. The average yield of the Desi hens has increased from 84 in 1939-40 to 135 in 1947-48. At the Madras Poultry Research Station, the average yield of eggs per hen for the different breeds was as follows:—

White leg horn	180
Rhode Island	151
Black Minorca	156
Indigenous	145

Veterinary Institutions.

The total number of Government and Private Veterinary Institutions in the Province is 140; the total number of in-and out-patients treated in all of them in 1947-48 was 329,926.

Statement showing the number of animals treated.*

	Institutions	Veterinary Assistant Surgeons	In patients treated	Out patients	Grand Total of in & out patients	Castrations performed
Government	138	140	12,337	311,610	323,947	54,688
Private	2	2	1,352	4,627	5,979	755
Total ...	140	142	13.689	316,237	329,926	55,443

Cost of Administrative Services.

The cost of administrative staff in the years from 1946-47 to 1949-50 is tabulated below:—

(Rs. in lakhs)

	1946-47	1947-48	1948-49	1949-50
Pay of Officers	1.84	2.23	2.31	2.64
Pay of Establishments	7.09	8.82	8.70	10.15

* Include bovines, equines and others.

Allowances & Honoraria:—

	1946-47	1947-48	1948-49	1949-50
Officers	4.86	6.67	1.20	1.25
Establishments	...	...	6.70	7.02
Total ...	13.79	17.72	18.91	21.06

Expenditure on Animal Husbandry.

Expenditure on Animal Husbandry in this Province has risen from Rs. 12.85 lakhs in 1938-39 to Rs. 43.64 lakhs in 1949-50. From 5 pies in the former year, the per capita expenditure has risen to 15 pies in the latter year. There has been a three fold rise, yet it is only about one-third of that in U.P. which incurs the highest per capita expenditure in India.

X. RURAL DEVELOPMENT

Objectives.

At the end of 1946, the Congress Ministry set up a new Department known as Firka Development Department with the objects of accelerating the economic development and promoting social welfare in 34 selected Firkas (or groups of villages containing in all 2,859 villages) by organising the villages for maximum productivity, full employment and good social and living conditions with the active co-operation of the villagers. The idea is to extend this work to other firkas after some experience is gained in the selected firkas. Government have recently decided to extend the work of intensive rural development to 50 new firkas this year.

Functions.

The programme of work is being carried on in five distinct spheres—(1) agriculture and village industries, (2) sanitation, health and housing, (3) village education, (4) village organization and (5) village culture.

In the selected firkas, the activities of the departments of Agriculture, Animal Husbandry, Co-operation, Public Health, Industries, Public Works, etc., have been co-ordinated and integrated to secure maximum advantage to the villagers. Local firka committees consisting of officials and non-officials have also been constituted.

Agriculture and Rural Industries.

Promotion of agriculture, the basic industry in the village economy, has been given the highest priority. Attention is specially

concentrated on the provision of irrigation facilities, cheap electric power and on the creation of 4 or 5 model villages in each firka. Lands are being reclaimed, manure and compost pits dug, anti-erosion bunding operations undertaken and tanks repaired. About 32 village industries including food processing, Khadi, handloom weaving, pottery, soap and paper making, mat and basket making, etc., have been selected for development. Demonstration and training units have been set up and industrial schools for coir making, glass bangles and beads and ceramics opened.

Other Activities.

Government have approved a scheme for opening a medical and public health centre in each of the selected firkas. Supply of drinking water has been given high priority among the schemes to improve the health of villagers. Considerable attention is devoted to the village organisation. Roads linking the villages with nearby towns are being laid out. Multipurpose co-operative societies and panchayat boards are being set up. Grama Seva Sanghs consisting of trained and experienced social workers have also been formed.

Education.

Village schools for children and night schools for adults have been opened. Libraries and reading rooms are being provided for villagers and radio sets installed. Active social workers are enlisted and given concrete schemes with strict time schedules, e.g., planting of trees, poultry raising, pisciculture, spinning, etc.

Public Interest and Co-operation.

In all constructive schemes undertaken by the Firka Development Department, the villagers are afforded ample opportunities to show

their initiative and to play a vital role. Unless a portion of its estimate cost is forth-coming from villagers, no scheme is undertaken and the contribution must come voluntarily in the shape of money, men and materials. This contribution makes the scheme their own giving an incentive to the villagers to push through the scheme quickly under their personal care.)

XI. HARIJAN WELFARE

Population.

Harijans including about 6 lakhs of hill tribes form 8.068 millions or 16.2 per cent of the population of the Province according to 1941 Census. Of these 7.328 millions or 90.8 per cent live in villages and 0.740 millions or 9.2 per cent in municipal towns.

Harijan Uplift.

The deplorably low social and economic conditions of the Harijans in this Province led to an enquiry 30 years ago and to the appointment of a special officer (Sir George Paddison, I.C.S.) in 1919. Next year, a separate administrative unit to look after their interests was placed in charge of a Commissioner of Labour. The interest in the welfare of Harijans broadened and deepened after the Poona Pact, 1932 and culminated in the appointment in 1937 of a Harijan as a Minister in charge of the uplift of his community. The first Congress Ministry, before the war, passed the Harijan Temple Entry Act. In the legislative sphere, the statutory disabilities of the Harijans have been removed by the passing of the Removal of the Civil Disabilities Act, 1947 and the Temple Entry Authorization Act, 1947.

One-Crore-Rupee Fund.

The Congress Ministry on resumption of office in 1946 set apart a one-crore-rupee fund, called "Harijan Uplift Fund" to ameliorate the conditions of Harijans. To enable more efficient administration of the Fund a separate department of Harijan Welfare under an Honorary Director has been set up from 1st April 1949; the staff working under the Commissioner of Labour has been transferred to this new department.

Harijan Welfare Committee.

The Harijan Welfare Committee appointed by the Government has laid down the following order of precedence among the various needs of the Harijan Community: (1) Living Accommodation, (2) Housing, (3) Water Supply, (4) Health and Sanitation, (5) Occupation, (6) Education, (7) Medical Relief, and (8) Removal of special and local disabilities.

The Committee has drawn up a programme; it aims at acquisition of 100,000 house sites, about 4,000 for each district; setting up 4 colonies of 20 to 30 houses in each district, sinking of 400 wells and formation of 40 cottage industries co-operative societies in each district; also at providing four travelling vans for each district with equipment for demonstration and propaganda and establishment of 12 mobile medical units. These targets are to be attained in 5 years.

To implement this programme, following allotments are recommended; Rs. 500,000 for house sites, Rs. 15,00,000 for housing, Rs. 10,00,000 for water supply, Rs. 5,00,000 for health and sanitation, Rs. 10,00,000 for the development of Cottage industries and Rs. 10,00,000 for medical aid.

Harijan Welfare work is mainly concentrated on the opening of labour schools, granting of scholarships, provision of midday meals to school-going children, acquisition of house sites, repair and sinking of wells and assignment of land for cultivation.

Labour Schools.

Labour Schools for Harijan children were opened in 1919-20. From a moderate beginning of 49 schools with 1,243 pupils of which 39 were girls, the number of schools has increased to 1,194, the strength

to 84,432 and the number of girls to 28,488 in 1947-48. But the development was not steady but irregular. In the first 4 years, there was a gradual growth but between 1923-24 and 1930-31, the development was so rapid that it was followed by a reaction. A number of schools, found to be uneconomic, had to be closed in the year 1931-32 and 1932-33. The next five years witnessed once again steady development but the war years held up the progress. In the post-war years, particularly after the advent of the Congress Ministry, there has been a noteworthy development. The progress may be seen from the table below:—

Year.	Number of Schools.	Number of teachers.	Number of pupils. Boys.	Number of pupils. Girls.	Number of hostels.	Number of pupils in the hostels.
1919-20	49	...	1204	39	..	...
1923-24	794	473	19778	2801	1	32
1930-31	1784	2131	52858	10746	8	..
1932-33	888	...	25742	6405	9	387
1937-38	1190	...	37093	11104	14	470
1943-44	1085	1772	34044	17488	66	1786
1947-48	1194	2485	55934	28488	156	4084

Expenditure on Labour Schools.

The total expenditure on labour schools amounted to Rs. 1,40,400 during 1923-24, i.e., Rs. 6.218 per pupil attending school. The expenditure rose to Rs. 7,05,013 by 1937-38 representing a per capita expense of Rs. 14.626 per school-going child.

Expenditure on labour schools has steadily grown in the past five years from Rs. 24,48,000 in 1945-46 to Rs. 46,48,200 in 1949-50. The two major items of expenditure consist of the establishment charges of labour school teachers, etc., and provision of midday meals. The former has increased from Rs. 7,12,336 to Rs. 11,50,000 and the latter from Rs. 8,37,462 to Rs. 19,25,800. Scholarships and schooling charges have risen from Rs. 172,818 to Rs. 2,76,400 and boarding grants from Rs. 2,32,025 to Rs. 6,44,300.

The following statement shows the general position of labour schools in the last two years:—

	RS.	RS.
	1946-47	1947-48
Number of schools	1,148	1,194
Number of teachers	2,207	2,485
Number of boys	50,538	55,944
Number of girls	27,136	28,488
Total strength	77,674	84,432
Number of pupils per teacher	35	34
Total amount spent on Harijan education	31,32,504	36,42,042
Amount spent per pupil attending school	40.329	43.135

XII. EDUCATION

Institutions.

There are 3 Universities in this Province, Madras, Andhra and Annamalai, the last being residential. The various types of institutions in the Province for males and females are shown below: —

Types of Institutions in 1948.

Institutions	Number		
	Males	Females	Total
Arts Colleges *	71	10	81
Professional Colleges	21	5	26
High Schools	637	165	802
Middle Schools	179	56	235
Primary Schools	32,400	4,187	36,587
Special Schools	473	151	624
Total ...	33,781	4,574	38,355
Unrecognised ...	189	...	189
GRAND TOTAL ...	33,970	4,574	38,544

There is one institution in this Province for 1,383 of population in 1948-49 against 1 for 1,529 of population in British India and 1 for 781 of the male and 1 for 5,854 of the female population, the corresponding figures for British India † being one for 910 of the male and one for 5,681 of the female population.

* Includes Science and Oriental Colleges.

† Figures for British India relate to 1945-46.

Scholars.

The total number of scholars in the various types of institutions is shown below: —

Number of Scholars in the various types of institutions in 1947.

Institutions	Males	Females	Total
Annamalai University	1,278 *	...	1,278
Arts Colleges	32,015	1,806	33,821
Professional Colleges	5,622	333	5,955
High Schools	3,86,827	56,100	4,42,927
Middle Schools	37,823	9,570	47,393
Primary Schools	31,28,142	5,23,704	36,51,846
Special Schools	33,977	9,865	43,842
Total ...	36,24,406 †	6,01,378	42,25,784 †
Unrecognised Institutions	7,917	...	7,917
GRAND TOTAL ...	36,33,601	6,01,378	42,34,979

The total number of scholars is 42,34,979 or about 8 per cent of the total population. Of this number, the male scholars are 36,22,323 or 13.68 per cent of the male and the female scholars 6,01,378 or 2.24 per cent of female population.†

The number of scholars in graduate and post graduate classes is 16,225 and that in intermediate classes is 24,829. The number of intermediate or second grade college is 13 of which 2 is for females.

* Includes Women students.

† Excludes 1,278 students of the Annamalai University.

Professional Colleges.

The professional colleges and the scholars in them are shown below: —

Professional Colleges	Males No.	Males Strength	Females No.	Females Strength
Law	2	824	...	11
Medicine	5	1,588	1	552
Education	3	269	4	195
Engineering	4	1,309	...	2
Agriculture	2	546	...	8
Technology	3	290	...	...
Forestry	1	64	...	...
Veterinary	1	297	...	...

Special Schools.

The various types of special schools and their strength is shown below: —

Institutions	Males No.	Males Strength	Females No.	Females Strength	Total No.	Total Strength
Arts	5	275	...	4	5	279
Medical	1	326	...	41	1	367
Normal or Training	75	11,673	88	6,254	113	17,927
Technical & Industrial	62	5,440	29	972	91	6,412
Commercial	233	9,320	...	406	233	9,726
Agriculture	1	62	...	...	1	62
Reformatory	4	1,553	2	364	6	1,917
For Physically and mentally handicapped	12	548	2	236	14	784
Adult	9	321	1	80	10	401
Others	71	3,599	29	2,368	100	5,967
Total ...	473	33,117	151	10,725	624	43,842

Teachers

The number of teachers—men and women—in different grades is tabulated below:—

Number of Teachers.

	Trained	Untrained	Total
Primary Schools:—			
Males	88,441	6,312	94,753
Females	25,857	1,297	27,154
Middle Schools:—			
Males	1,859	335	2,194
Females	551	71	622
High Schools:—			
Males	12,655	2,569	15,224
Females	2,838	429	3,267
Total ...	132,201	11,013	143,214

In an expanding educational programme, the greatest bottle-neck is availability of trained teachers. At present the trained teachers form 92.31 per cent of the total, 91.78 per cent of the male teachers and 94.21 per cent of the female teachers.

Teacher-Scholar Ratio.

The number of scholars and teachers in the Madras Province and British India is given below: —

	Males	Females	Total
Teachers: —			
Madras (1948)	112,171	31,043	143,214
British India (1945-46)	464,917	73,590	538,507
No. of Scholars: —			
Madras (1948)	3,552,792	589,374	4,142,166
British India (1945-46)	11,868,726	3,815,360	15,684,086

There is one teacher for 28 scholars in Madras against 29 in British India, one male teacher for 36 male scholars in Madras against 26 in British India, and one female teacher for 19 female scholars in Madras Province against 52 in British India.

Examinations.

The number of successful candidates in the Arts and Professional Degree, S.S.L.C. and other examinations is given below: —

Examination Results.

	Madras (1947-48) Males	Madras (1947-48) Females	British India (1945-46) Males	British India (1945-46) Females
No. of students passing passing Degree Examination (Arts & Science)	3,860	718	14,613 *	2,412 *

* Students passing B.A. & B.Sc. pass & Hons. only.

	Madras (1947-48) Males	Madras (1947-48) Females	British India (1945-46) Males	British India (1945-46) Females
No. of students passing out of professional colleges	1,653	298	N.A.	N.A.
No. of students passing S.S.L.C. or equivalent Examination	49,067	5,763	1,19,436	17,542
No. scholars in V class of Primary Schools	287,798	132,326	N.A.	N.A.

Expenditure on Education from Different Sources.

Expenditure on education is met from the funds of Government, district boards, municipalities, private institutions as well as income from fees. In Madras, expenditure from Government funds amount to 50.43 per cent against 42.44 per cent for British India ; from district board funds to 12.79 per cent against 9.43 per cent ; from fees to 18.36 per cent against 27.58 per cent ; from endowments to 15.28 per cent against 14.60 per cent and from municipalities to 3.14 per cent against 5.95 per cent.

EXPENDITURE ON EDUCATION

(in Rupees)

Sources.	Madras (1947-48).				British India (1945-46)			
	Madras.	Females.	Total	% to total	Males.	Females.	Total.	% to total.
Expenditure from								
Government Funds	6,13,51,077	1,15,56,440	7,29,97,517	50.43	16,65,44,330	2,81,33,329	19,46,77,659	42.44
District Board Funds	1,55,10,247	29,73,599	1,84,83,846	12.79	3,91,60,154	40,74,833	4,32,34,987	9.43
Municipal Funds	27,86,325	17,50,833	45,37,158	3.14	1,85,42,799	87,72,798	2,73,15,597	5.95
Fees	2,30,35,536	35,15,904	2,65,51,440	18.36	11,32,25,150	1,32,66,007	12,64,91,157	27.58
Endowments & other sources	1,67,08,091	53,82,837	2,20,90,928	15.28	5,46,52,007	1,23,34,974	6,69,86,981	14.60
Total ..	11,93,91,276	2,51,79,613	14,45,70,889	100.00	39,21,24,440	6,65,81,941	45,87,06,381	100.00

Per capita expenditure from all sources.

The per capita expenditure on education from all sources for males and females is Rs. 2-11-11 in this Province against Rs. 1-7-0 in British India; for males only it is Rs. 4-7-11 in this Province against Rs. 2-5-10 in British India and for females Re. 0-15-1 against Re. 0-6-11 as may be seen below:—

The per capita expenditure from all sources.

	Madras	British India.
	RS.	RS.
Males & Females per capita	2 11 11	1 7 0
Males alone	4 7 11	2 5 10
Females alone	0 15 1	0 6 11

Expenditure on Collegiate, Secondary and Primary Education.

Expenditure on different stages of education is tabulated below. Of the total Government expenditure, 6.79 per cent is spent on collegiate, 7.88 per cent on High School and 65.07 per cent on primary education and 20.26 per cent on other institutions.

Stages of Education	Government @		Non-Government		Government and Non-Government	
	Amount Rs.	% to total	Amount Rs.	% to total	Amount Rs.	% to total
Collegiate	65,09,488	6.79	72,80,386	14.97	1,37,89,874	9.54
High School including Middle School	75,60,157	7.88	183,46,318	37.72	2,59,06,475	17.92
Primary	624,19,298	65.07	41,33,578	8.50	6,65,52,876	46.03
Others	194,39,578	20.26	188,82,086	38.81	3,83,21,664	26.51
Total	959,28,521	100.00	486,42,368	100.00	14,45,70,889	100.00

@ Including Local Boards and Municipalities.

Growth of Expenditure on Education.

The per capita as well as total expenditure has steadily risen in the past 50 years, as the following statement will show:—

Year	Population	Government@	Non Government	Total	Government	Non Government	Total
		(Rs. in 1,000s)			Per Capita in Rs.		
1899–1900	35,711,000	29,80	41,82	71,62	0 1 4	0 1 11	0 3 3
1909–1910	38,572,000	53,69	65,70	1,19,39	0 2 3	0 2 9	0 5 0
1918–1919	40,034,000	1,32,25	1,15,77	2,48,02	0 5 3	0 4 8	0 9 11
1929–1930	43,803,000	3,52,82	1,85,45	5,38,07	0 13 0	0 6 8	1 3 8
1938–1939	47,757,000	3,51,60	2,19,40	5,71,00	0 11 10	0 7 4	1 3 2
1947–1948	52,721,000	9,50,92	4,86,42	14,46,34	1 13 1	0 14 10	2 11 11
1949–1950	53,846,000	9,38,93*	...	...	1 11 11	...	...

@ Includes expenditure from the funds of District Boards and Municipalities.

* Includes expenditure by the Provincial Government only.

Expenditure on education by the Government has risen from Rs. 3,57,11,000 in 1899-1900 to Rs. 9,59,29,000 in 1947-48 and the per capita expenditure has increased from Re. 0-1-4 to Rs. 1-13-1. In the same period, expenditure from non-Government funds has also recorded a steady rise from Re. 0-1-11 in 1899-90 to Re. 0-14-10 in 1947-48.

Cost of Administrative Services.

The cost of administrative staff in the years from 1946-47 to 1949-50 is tabulated below: —

(Rs. in lakhs)

	1946-47	1947-48	1948-49	1949-50
Pay of Officers	10.33	11.48	12.16	13.99
Pay of establishments	40.88	47.11	50.33	58.65
Allowances & Honoraria: —				
Officers	...	...	2.77	2.75
Establishments	21.91	24.07	26.54	27.94
Total ...	73.12	82.66	91.80	103.33

Expenditure on Education in this Province has risen from Rs. 261.98 lakhs in 1938-39 to Rs. 938.93 lakhs in 1949-50. From Re. 0-8-9 in the former year, the per capita expenditure has risen to Rs. 1-11-11 in this period. There has been more than three fold rise but it is less than half of that in Bombay which incurs the highest per capita expenditure in India.

XIII. MEDICAL AID.

The Medical Department deals with medical relief, medical research and medical education. The department has under its control all the important hospitals in Madras City and at the head-quarters of the districts and taluks and in special tracts. The responsibility for medical relief in rural areas devolves upon local bodies, though the Government assist these bodies in several ways, by placing the services of Government medical officers at their disposal, by grants for medical buildings and by subsidies to rural medical practitioners.

Medical Education.

In order to meet the increasing demand for admission to the Medical Colleges, two new colleges, one at Guntur and the other at Mathurai, were started during the year 1946 in addition to the existing three Government medical colleges and the Missionary Medical College for Women at Vellore, an aided institution.

The University of Madras offers post-graduate diploma and higher degree cousres in Medicine, Surgery, Midwifery, Tuberculosis, etc., and the Andhra University has M.Sc. courses in Gynaecology and Obstetrics, Laryngology and Otology, Ophthalmology, etc. The women students belonging to the Muslim community, the Backward and Scheduled classes are allowed half-fee concession. Non-Muslim refugee medical students from Western Pakistan have also been admitted in the Medical Colleges of this Province.

To meet the growing need for ophthalmic surgeons in the mofussil, intensive training in ophthalmic surgery is being given to post-graduates at the Government Ophthalmic Hospital, Madras.

A School of Indian Medicine, opened in Madras City in 1925 with a hospital attached to it, has been expanded into a College. The indigenous system of medicine is taught, supplemented by instruction in certain subjects according to the western system. The college has three departments—Ayurveda, Siddha and Unani—and it provides training to enable students to become competent practitioners of Indian systems of medicine.

Medical Research.

Special medical research is carried on at the King Institute of Preventive Medicine, Guindy, and the Pasteur Institute, Coonoor. The former is controlled by the Medical Department while the latter is a quasi-public institution, the medical staff being provided by the Government. A Pharmacological Research Unit is maintained in the Medical College, Madras, for conducting research on the indigenous drugs of South India. For medico-legal purposes, a special staff is maintained.

SPECIAL INSTITUTIONS.

Leprosy: There is a large settlement for the segregation of lepers at Tirumani (Chingleput district). The Madras Provincial Branch of the British Empire Leprosy Relief Association is in charge of the leprosy work in the Province. As a preliminary to the introduction of schemes of Post-War Development of leprosy control, a specialist was appointed as Honorary Director of Leprosy Research. The Government have under consideration a proposal to establish Provincial and District Survey Units. The post-graduate training in the treatment of leprosy was given to rural medical practitioners and private medical practitioners at the Lady Willingdon Leprosy Sanatorium, Tirumani.

X-Ray: The Director of the Barnard Institute of Radiology is in administrative charge of the X-Ray departments in the various medical institutions in the Province. Post-war schemes of the Madras Government contemplate the establishment of X-Ray departments in all taluk headquarters hospitals. The Madras Provincial Welfare Fund sanctioned a sum of Rs. 1,20,000 for the purchase of X-Ray sets for use in the various medical institutions in the Province. It has, in addition, agreed to meet the cost of X-Ray plants required for the headquarters hospitals, Cuddalore, Anantapur and the Government Hospital, Coonoor. A new 500 M.A. rotating anode X-Ray apparatus for diagnosis costing Rs. 76,000, has been installed in the Barnard Institute of Radiology.

Tuberculosis: There are special hospitals and sanatoria for the treatment of tuberculosis. A large number of wards are being constructed and the number of beds increased in a campaign against tuberculosis of lungs. The total number of patients treated in all the hospitals and sanatoria in 1947, was 61,611 and for other forms of tuberculosis was 27,086.

Transplantation of Cornea: An eye bank was started in the Government Ophthalmic Hospital, Madras, in 1947. The Superintendent, Stanley Hospital, Madras, is asked to supply cornea from destitute and unclaimed dead bodies in his Hospital. If the scheme is successful, the Govrnment General Hospital, Madras, will be required to supply cornea from the dead bodies of destitute patients dying in the hospital.

Blood Transfusion Service: The Blood Transfusion Service in this Province was started in April 1941 for the purpose of building a

reserve of blood and plasma for the treatment of emergency casualties. It has now been reorganized on a peace-time basis. Blood banks have been opened in the Government General and Stanley Hospitals, Madras, in the King George Hospital, Visakhapatnam, in the District Headquarters Hospitals at Mathurai, Tiruchirapalli, Coimbatore, Calicut and Kakinada and in the Government Hospital at Cochin, with processing centres at the King Institute, Guindy and at the Pasteur Institute, Coonoor. The response from the public for donation of blood has been encouraging. A Provincial Blood Transfusion Officer has been placed in executive charge of the entire service. Lectures and practical demonstrations in the subject are given to medical officers and practitioners and in all important exhibitions, the blood transfusion service is demonstrated and popularised.

The Drugs Act.

The Drugs Act and the rules framed thereunder for licensing the manufacture and sale of drugs came into force in the Province from 1st April 1947. The Surgeon-General with the Government of Madras is the Provincial Drugs Controller; separate staff is appointed for enforcing the Act and the rules. A Special Department of Biological control and a Laboratory for the analysis of drugs was opened at the King Institute, Guindy.

Medical Institutions and Personnel.

There are 1,211 medical institutions of all classes in the Province. The following table gives the number of institutions under each class.

Number of Medical Institutions.

	1880	1890	1900	1910	1920	1931	1947
State Public	...	...	...	14	44	189	192
State Special	13	16	19	51	46	32	24
Local Fund	198	380	426	467	517	491 *	489
Private Aided	5	18	19	25	29	409	62
Private non-aided	2	1	...	36	54	73	88
Railways	...	...	...	44	47	51	57
Rural subsidized dispensaries	...	...	...	...	...	...	299
Total ...	218	415	464	637	737	1245	1211

The various medical institutions are served by 1,876 doctors, 1,536 nurses, 1,099 midwives, and 1,353 compounders. The total number of doctors on the medical register in this Province is 8,507, nurses 4,037 and midwives 6,050 ; there also 1,223 qualified medical practitioners in Indian Medicine.

The total number of beds in hospitals for both sexes during the year 1947 was 16,208 and the ratio of beds available to the population of the Province is 1: 3705. The total number of in-patients and out-patients treated during the year were 498,131 and 17,360,024 respectively. The statement below gives the number of beds, number of in-patients and number of out-patients with the daily average number treated.

* These include those subsidized by Government in rural areas.

Number of beds, in-patients, out-patients and the average attendance.

Year.	No. of beds.	No. of in patients.	Daily average.	No. of out patients.	Daily average.
1880	3,229	38,870	2,071	1,274,434	9,963
1890	3,552	47,739	2,223	2,663,418	17,796
1900	4,649	62,906	2,857	4,811,125	26,445
1910	5,317	77,633	3,429	6,007,735	36,721
1920	7,360	125,910	5,613	7,672,562	41,198
1931	9,451	207,847	8,476	14,209,576	92,249
1947	16,208	498,131	19,901	17,360,024	125,236

Between 1945 and 1947 there has been a progressive decline in the number of deaths among the in-patients; the percentage deaths to the total number of in-patients treated fell from 4.53 in 1945 to 4.04 in 1947. The total number of operations performed during 1947 was 620,939 and the percentage of deaths to the total operations was only 0.25. On the whole 147,710 labour cases were conducted in all the hospitals.

Cost of Administration:

The cost of administrative personnel from the year 1946-47 to 1949-50 is tabulated below:—

	1946-47	1947-48	1948-49	1949-50
		(Rs. in lakhs)		
Pay of Officers	21.25	28.06	23.15	23.64
Pay of Establishments	34.23	37.89	41.69	46.55
Allowances & Honoraria:—				
Officers	31.25	...	6.97	7.97
Establishments	...	35.08	33.50	37.17
Total ...	86.73	101.03	105.31	115.33

Government Expenditure:

The expenidture on medical aid by the Government in the past three years together with the per capita exnediture is tabulated below: —

	1947-48	1948-49	1949-50
Total expenditure (Rs. in lakhs)	238.49	262.53	254.01
Per capita (in Re.)	0 7 3	0 7 11	0 7 7

Expenditure on Medical Aid in this Province has risen from Rs. 98.14 lakhs in 1938-39 to Rs. 254.01 lakhs in 1949-50. From Re. 0-3-3 in the former year, the per capita expenditure has risen to Re. 0-7-7 in this period. There has been more than two fold rise but it is less than one-third of that in West Bengal which incurs the highest per capita expenditure in India.

XIV. PUBLIC HEALTH.

***Functions*:**

The Department of Public Health has a variety of functions of which the important are: —(1) registration of vital statistics, (2) training and employment of medical and sanitary officers and vaccinators for the control of epidemic and endemic diseases, (3) sanitary arrangements for the health and convenience of large gatherings of people at fairs and festivals, (4) prevention of overcrowding in cinemas and theatres and sale of adulterated articles of food, (5) propaganda on health, (6) maternity and child welfare, (7) town planning and (8) research on nutrition and vaccination.

Health Officers :

There are 186 Health Officers of whom 14 are employed in anti-malaria work. There is one Health Officer per 89,000 of the population.

***Vaccination*:**

Vaccination is compulsory throughout the Province except in certain partially excluded areas. There is one vaccinator per 58,977 of the population. The number of primray and secondary vaccinations performed was 1,528,073 and re-vaccinations 3,353,303 making a total of 4,881,376.

Maternity and Child Welfare:

This branch of personal health services is gaining great importance in this Province. In 1947, 22 maternity and child welfare centres were newly opened in various districts bringing the total number to 338 of which 318 are conducted by local bodies and 20 are aided and managed by private bodies. The number of medical women appointed in maternity and child welfare centres and available as consultants in medical institutions and in private practice is 375. The number

of such medical women per 1,000 births (live and still) is 0.05 for the districts, 1.37 for municipalities and 0.22 for the Province. The number of health visitors, midwives and the number of visits made by them are shown below:—

Maternity and Child Welfare in Rural Areas and in the Municipalities during the year 1947.

1.	Amount spent on maternity and child Welfare Work	Rs. 13,02,833
2.	Maternity and Child Welfare Centres	338
3.	Medical Women	375
4.	Number of Health Visitors	106
5.	Number of Midwives	2,317

Number of visits made by Health Visitors and Midwives in 1947.

Staff	No.	House Visits		
		Anti-natal	Post-natal	Child
Health Visitors	106	154,532	177,327	96,547
Midwives	2,317	685,457	685,491	142,095
Total ...	2,423	839,989	862,818	238,642

Health visitors and midwives also conduct mothers' classes, lantern lectures, etc. Their activities are summarised below:—

Other activities of Health Visitors and Midwives.

Number of clinics held	24,201
Antinatal cases visited	216,241
Infants cases visited	224,978
Pre-school children visited	80,443
Nursing mothers visited	228,928
Mothers' classes held	4,599
Lantern Lectures delivered	1,426
Number of schools visited	1,317
Number of health talks given	2,265

This Province has one midwife per 739 births. The corresponding figures for British India and U.K. are tabulated below:—

Ratio between Health Visitors and Midwives to population.

	British India	U.K.
Health Visitors	1 to 4 lakhs	1 to 4,770
Midwives	1 to 60,000	1 to 618 births.

According to the recommendations of the Health Survey and Development Committee, the ratio to be attained in 1971 is one health visitor to 5,000 of the population and one midwife to 100 births.

VITAL STATISTICS

The number of registered births in 1947 (the latest year for which statistics are available) was 1,713,402 (879,410 males and 833,992 females) giving a birth rate of 32.72 per 1,000 of the estimated mid-year population.

The trend of birth rates in this Province in recent years may be compared with trends in some other provinces from the following statement below:—

Birth Rate per Mille.

Year	Madras *	Bombay	U.P.	Bihar	C.P.
1940	34.85	36.6	30.8	27.9	37.5
1941	34.84	36.5	32.1	28.8	42.5
1942	33.81	34.2	28.5	24.2	39.3
1943	31.12	33.2	24.7	20.3	36.9
1944	29.39	34.1	25.1	20.8	37.8
1945	29.45	33.8	27.3	23.5	39.2
1946	31.62	...	...	...	...
1947	32.72	...	...	...	...

The birth rate per mille among the different communities are as follows:—

Hindus	34.79	Christians	37.09
Muslims	37.36	Others	12.43

Death-rate:

The number of recorded deaths was 1,050,720 (531,329 males and 519,391 females) giving a death-rate of 20.06 per 1,000. The survival rate in the Province as a whole was 12.66 and it ranged from 6.02 in Kurnool district to 20.74 in Malabar district.

* From Annual Report of the Director of Public Health for 1947 and Statistics for other Provinces from the Annual Report of the P.H. Commissioner with Government of India, 1945.

Birth and death-rates in the districts:

The birth-rate and death-rate for districts as per estimated mid-year population for the year 1947 are given below: —

District	Birth-rate	Death-rate
1. Anantapur	35.76	24.85
2. Bellary	35.30	28.74
3. Chingleput	32.17	20.51
4. Chittoor	27.96	15.53
5. Coimbatore	31.93	17.09
6. Cuddapah	28.92	18.54
7. Godavari East Plain	32.12	21.16
Agency	37.19	25.49
8. Godavari West Plain	34.22	22.20
Agency	35.72	24.77
9. Guntur	32.61	17.92
10. Krishna	35.29	19.48
11. Kurnool	32.94	26.86
12. Madras	42.08	30.96
13. Mathurai	32.70	20.14
14. Malabar	36.69	15.95
15. Nellore	29.28	17.45
16. Nilgiris	36.06	18.03
17. North Arcot	34.41	20.15
18. Ramnad	31.86	18.15
19. Salem	27.11	16.34
20. South Arcot	31.22	19.23
21. South Kanara	37.51	19.62
22. Tanjore	29.08	20.47
23. Tirunelveli	35.92	21.71
24. Tiruchirapalli	28.16	21.38
25. Visakhapatnam	34.39	23.93
Total Madras Province ...	32.72	20.06

Birth and death-rate in urban and rural areas:

The birth and death rates in the urban and rural areas with their respective population are given below:—

Birth and Death Rates in 1947.

Area	Population	Birth-rate	Death-rate
Whole Province	52,369,677	32.72	20.06
Urban areas *	8,529,848	36.23	21.61
Rural areas	43,839,829	32.03	19.76

Infantile Mortality:

In 1947, 2,51,461 infants under one year died giving an infantile mortality rate of 146.76 per 1,000 live births. The percentage of infantile deaths to total deaths was 23.9. The infantile mortality rates in urban and rural areas were 144.53 and 147.25 respectively.

The trend of the infantile mortality rate, considered to be a sensitive index of the health conditions of the general population is shown below:—

Infantile Mortality Rate.

Year	Madras †	Bombay	U.P.	Bihar	C.P.
1938	166.04	...	...	...	...
1939	175.60	...	...	...	...
1940	168.66	169.5	135.3	117.7	226.1
1941	170.92	159.0	131.2	109.0	215.3
1942	159.67	160.5	143.1	106.4	232.3
1943	172.28	157.4	134.6	98.7	206.1
1944	192.44	166.1	124.5	111.3	221.4
1945	169.44	161.2	123.2	100.1	256.6
1946	146.88	...	...	...	...
1947	146.76	...	...	...	...

* Include municipalities and rural towns.

† Annual Report of the Director of Public Health for 1947. Other Statistics from the Annual Report of the Public Health Commissioner with the Government of India.

Maternal Mortality:

As a result of child-birth, 14,469 mothers died in 1947 giving a maternal mortality rate of 8.34 per 1,000 births (live and still). The rates for urban and rural areas were 9.23 and 8.14 respectively.

The maternal mortality for the last 8 years for Madras is tabulated below:—

Year	Rate	Year	Rate
1940	8.65	1944	9.98
1941	9.13	1945	9.29
1942	8.60	1946	7.94
1943	8.51	1947	8.34

Mortality due to chief epidemics:—

The mortality figures for 11 years between 1938 and 1948 due to the three epidemics, cholera, smallpox and plague are given below:—

Year	Cholera	Smallpox	Plague
1938	10,252	2,273	1,155
1939	2,115	3,120	324
1940	6,418	4,310	1,169
1941	8,510	2,755	1,326
1942	52,380	3,413	701
1943	117,039	7,925	4,805
1944	18,318	19,776	1,738
1945	8,494	20,636	1,644
1946	753	7,923	2,254
1947	12,743	2,650	2,718
1948	26,171	2,932	916

Deaths classified according to principal causes:—

Disease	No. of deaths 1947	Percentage to total
Cholera	12,743	1.2
Smallpox	2,650	0.25
Plague	2,718	0.30
Fevers	2,58,207	24.2
Dysentery & Diarrhoea	75,719	7.3
Respiratory Diseases	99,428	9.5
Tuberculosis	6,964	0.70
Enteric Fevers	1,578	0.20
Rabies	388	0.03
Other causes	5,90,325	56.20
Total ...	10,50,720	100.00

Cost of Administrative Services:

The cost of administrative personnel in the years from 1946-47 to 1949-50 is tabulated below:—

	1946-47	1947-48	1948-49	1949-50
		(Rs. in lakhs)		
Pay of Officers	5.99	5.31	6.07	6.34
Pay of establishment	12.95	13.90	13.51	15.56
Allowances & Honoraria:—				
Officers	...	...	1.73	1.80
Establishments	9.69	10.63	10.28	10.92
Total ...	28.63	29.84	31.59	34.62

Expenditure on Public Health:

Expenditure on Public Health in this Province has risen from Rs. 26.57 lakhs in 1938-39 to Rs. 100.18 lakhs in 1949-50. From Re. 0-0-11 in the former year, the per capita expenditure has risen to Re. 0-3-0 in this period. There has been a more than three fold rise but it is only about one-fourth of that in Bombay which incurs the highest per capita expenditure in India.

XV. DEPARTMENT OF ECONOMICS AND STATISTICS.

The Department of Economics and Statistics functions as a separate unit in the Chief Secretariat. The Economic Adviser and Joint Secretary to the Government, the head of the department, is Secretary of the Economic Sub-Committee of the Cabinet composed of the Hon'ble Premier (Chairman) and the Hon'ble Ministers for Finance, Agriculture and Industry. The Economic Adviser co-ordinates and integrates all economic and developmental programmes and policies of the Government and presents a monthly progress report to the Sub-Committee. He is also Secretary of the Planning Committee composed of the Chief Secretary (Chairman), Secretary, Development Department, Director of Agriculture, Director of Industries and Commerce and Chief Engineers—Irrigation and Electricity. The Planning Committee scrutinises at its monthly meetings all the proposals for industrial development before they reach the Economic and Development Sub-Committees of the Cabinet; it also draws up and submits new schemes for industrial and other development work in the Province.

The department is engaged in the collection, analysis and interpretation of statistics relating to various sectors of the provincial economy like Agriculture, Industry, Trade, Transport and Commerce.

AGRICULTURAL STATISTICS:

The main functions of the agricultural statistics section are publication of crop forecasts, preparation of reports on weather, crops, utilisation of lands, condition of agricultural population, acreage and yield of food, non-food and plantation crops, crop cutting experiments, cost of cultivation of crops, distribution of holdings and legislation affecting agriculture. Periodical crop forecasts are at present issued for 22 crops; the number of forecasts issued is 9 for cotton, 8 for tobacco, 6 for sugarcane, groundnut and gingelly, 5 for paddy, 3 for

cholam, cumbu, ragi, korra, varagu, samai, Bengal gram and senna, 2 for blackgram, redgram, ginger and pepper, and one for maize, horsegram, greengram and castor. Monthly reviews of cultivation of 17 crops are prepared from the data furnished by the District Collectors and the progress of cultivation is watched and assessed. This section also prepares statements showing the acreage and production of crops in irrigated and unirrigated areas in each district. An advance report on the final acreage of tobacco in each district is prepared and remitted to the Indian Council of Agricultural Research. Graphs showing acreage, production and yield per acre of various crops are prepared and are periodically brought up-to-date. Estimates of area and production of some special crops like potatoes, arecanuts and coconuts are made and annual statements showing the production of coffee, tea and rubber, annual list of tea gardens and triennial statement of lists of coffee estates are prpared for the Government of India.

Statistics necessary for procurement of foodgrains are collected and compiled in this section. Statements showing statistics of producers, non-producers, partial producers, adults, children, manual labourers, etc., acreage and production of crops in the deltaic and non-deltaic areas as well as ryotwari and zamindari areas are also prepared.

Various subjects like the conduct of Agricultural Census, tabulation of area under improved strains of crops, report on crop forecasts arising from references from the Government of India are also dealt with by this section. A quinquennial return on the incidence of land revenue in the Province is compiled for the Government of India.

RAINFALL STATISTICS:

Monthly rainfall tables received from the District Collectors and States are scrutinised and published. They are consolidated every year for the publication of annual rainfall tables. Charts showing weekly and monthly rainfall statistics for each district are prepared.

PRICES:

Wholesale prices of 51 commodities at important stations in the Province are published in the *Fort St. George Gazette*. Daily and weekly reports on wholesale prices of fourteen and seven important commodities at select centres of the Province are sent to the All-India Radio Stations in Madras and Tiruchirapalli respectively. Reviews of wholesale prices of foodgrains and commercial products are prepared for circulation to Food, Revenue and Finance Departments. Statements of retail prices of foodgrains and salt at 306 stations in the Province are compiled and issued. Every fortnight, retail prices of salt at 5 centres in the Province are reported to the Collector of Central Excise in Madras and headquarters stations of certain districts and the Ministry of Industries and Supplies, New Delhi. Retail prices of foodgrains are reported every fortnight to Director of Statistics, Calcutta. Every month in the last week, a statement of retail prices of 29 commodities at select stations in the Province is published.

Weekly index numbers of wholesale prices of foodgrains and commercial crops for the whole Province and monthly index numbers of food and non-food articles for Madras City are compiled. Monthly index numbers of retail prices of certain commodities in the Province are also compiled. Statistics relating to cost of production of crops, including prices of essential articles consumed by agriculturists, are collected and are utilised in the fixation of prices for paddy, rice and

millets annually. Every fortnight a statement of prices of 25 commodities included in Zonal Scheme is compiled from reports received from two or three Tahsildars in each district in the Province. Every week sixty special reports on the prices of groundnut cake in various centres in the Province are examined. The weekly trend of prices of firewood and charcoal is marked in charts for the use of the Commissioner of Civil Supplies. The various reports on wholesale prices are regularly furnished to the concerned Ministries, Government of India, Reserve Bank of India, to the Economic and Statistical Adviser, Ministry of Agriculture, Government of India and some departments of the Governments—Central and Provincial.

TRADE STATISTICS:

Statistics of foreign, coastwise and rail-borne trade reltaing to important commodities, like foodgrains, cotton, groundnut and pepper are compiled. Foodgrains imports and exports of the Province of Madras are reviewed every month in this section. Statistics of copra crushed, oil extracted and cake produced in the Province of Madras are collected and compiled. Monthly index numbers of declared values of foreign and coastwise imports and exports based on 184 commodities are constructed.

INDUSTRIAL STATISTICS:

The Industrial Statistics Act, 1942, of the Government of India is administered by this department. According to the Census of Manufacturing Industries rules framed under the Act, 63 industries are listed in the schedule. The total number of factories under section 2 (*m*) of the Factories Act, 1948, belonging to the Scheduled Industries is approximately 5,000. The occupiers of factories covered by the census are supplied with the prescribed forms to be filled up and returned to the Economic Adviser. The annual returns are collected by Economic Investigators posted in 8 different circles. They are

scrutinised by the headquarters staff and forwarded to the Director of Industrial Statistics, Simla, to whom also is sent a consolidated list of defects, discrepancies and mistakes noticed in the returns. The prescribed forms call for information relating to raw materials, fuel, labour, cost of production, prices of finished products, etc. At present only 29 industries under section 2 (*j*) of the Factories Act, 1934, have been covered which have amongst them about 1,500 factories.

PUBLICATIONS:

The Season and Crop Report is an annual publication describing weather conditions, classification of areas, sources and extent of irrigation, area under principal crops, maritime and foreign trade of the Province. It contains numerous statistical appendices relating to rainfall and weather, area under different classes of land, normal yield per acre, seasonal factor, total production of crops, average harvest prices, wholesale and retail prices of principal foodgrains, wholesale prices of important commodities, comparative statements showing imports into and exports from the Madras Province, of agricultural products and their manufacture, etc., with a large number of charts and graphs. Other important publications include the decennial Statistical Atlas of the Madras Province of about 1,000 pages, a quinquennial Statistical Abstract and a quinquennial Statistical Analysis of Wages.

SOCIO-ECONOMIC ENQUIRY:

A socio-economic enquiry aiming at eliciting information regarding the rural population, income, expenditure, indebtedness, employment and wages, cost of cultivation and prices of agricultural produce, systems of land tenure, methods of cultivation, trade and marketing conditions, transport and communication, health and sanitation, education and religious institutions, social life in rural conditions has been undertaken by the department. As a first instalment of this

comprehensive scheme an enquiry into the socio-economic effects of prohibition is in progress. Four Economic Investigators attend to the field investigation in co-operation with the staff of the Firka Development Department in the various firkas of the Province.

The department is undertaking *adhoc* enquiries like the enquiry into the working of the Motor Vehicles Taxation, the enquiry into the working of the Government Bus Transport in Madras City, investigation into the problem of milk supply and distribution in the city of Madras and the working of the State Aid to Industries Act, which have been completed or are nearing completion.

Several schemes for collection of reliable and accurate data relating to the various aspects of the provincial economy are under consideration and some of them have been approved. The publication of a monthly Digest of Statistics with an annual Statistical Abstract will be taken up shortly. The Statistical Abstract will be divided into 40 sections containing about 200 tables.

There are schemes for collection of statistics relating to output of raw materials, industries and industrial production, labour statistics, inland transport, crop-cutting experiments on 10 principal crops, cost of production of major crops, survey of wasteland available for reclamation, education, fisheries, etc. It is also proposed to add a section of visual statistics and publish a monthly Bulletin of Economic

Conditions. The Governments of Bombay, U.P. and Hyderabad have been for some time publishing bulletins of economic conditions giving economic administrative intelligence.

A scheme for the formation of Provincial, District, Taluk and Firka Economic Councils has been approved by the Cabinet. In the first instance, the Provincial and District Economic Councils will be constituted.

Cost of Administration.

The following statement shows briefly the cost of the administrative personnel :—

The Cost of administrative staff in 1949-50 is tabulated below :

	1949-50
	Rs.
Pay of Officers	33,080
Pay of Establishment ..	104,400
Allowances and Honoraria	
Officers	13,400
Establishment	59,500
TOTAL ..	210,380

XVI. PROVINCIAL FINANCE.

Revenue:

The revenue of the Government of Madras in 1949-50 is estimated at Rs. 55,75,32,000, the highest for any province in the Indian Union. It has risen from Rs. 16.13 crores in 1938-39 to Rs. 55.75 crores in 1949-50 or nearly 3.5 fold. In this period, the per capita revenue has risen from Rs. 3-6-1 to Rs. 10-5-7 or by 306 per cent. The provincial revenue forms at present 4.07 per cent of the provincial National Income. The revenue per rupee of the per capita income has declined from 8.2 pies to 6.7 pies in the last decade.

Composition:

The principal heads of revenue are Land Revenue, share in Taxes on Income other than Corporation Tax, Provincial Excise, General Sales Tax, Motor Vehicles Taxation, Stamp Duty, Registration, Forests, Irrigation and Electricity Schemes. Of these, Provincial Excise has completely disappeared in Madras. During the last decade the General Sales Tax has made spectacular progress and has become the largest yielder.

Tax-revenue:

The tax revenue of the Province is composed of receipts from Land Revenue, share in Taxes on Income other than Corporation Tax, General Sales Tax, Motor Vehicles Taxation and Stamp Duty. In the current year receipts from tax revenue aggregate to Rs. 38,22,68,000 or 68.56 per cent of the total revenue of this Province. The percentage of tax to total revenue is lower than that of Rs. 77.65 per cent in West Bengal and of 72.04 per cent in Bombay.

Direct and Indirect Taxes:

Direct taxes comprising of Land Revenue and Stamp Duty accounted for Rs. 6.86 crores or 60.6 per cent of the land tax revenue in 1938-39. But, in the past ten years the position of direct taxes had deteriorated. Their yield is only Rs. 9.69 crores or 31.93 per cent of the total tax revenue in 1949-50. Yield from Indirect Taxes which amounted to Rs. 4.57 crores and formed only 39.94 per cent in 1938-39 has increased to Rs. 20.65 crores or 68.07 per cent of the total tax revenue.

Receipts from Major Items of Revenue in 1949-50.

Heads of Revenue.	Receipts in thousands of Rs.	Per cent to total Revenue.	Per Capita Receipts.			Increase in no. of times between 1938-39 & 1949-50	
			RS.	A.	P.	Amount.	Per Capita.
Land Revenue	5,30,75	9.52	1	12	3*	1.03	1.09
Taxes on Income	7,89,30	14.16	1	7	5	35.08	31.22
General Sales Tax	12,45,00	23.35	2	5	0	...	...
Motor Vehicles Taxation	1,89,33	3.40	0	5	7	2.33	2.03
Stamp Duty	4,37,82	7.85	0	13	0	2.53	2.23
Forests	1,48,18	2.66	1	1	6 †	3.25	3.09
Registration	86,64	1.55	0	2	7	2.65	2.38
Irrigation Works	2,15,04	3.86	2	3	6 ‡	1.37	1.22
Electricity Projects	1,08,06	1.93	0	3	3	6.10	5.57

* Receipts per acre of cultivated area.

† Receipts per acre of forests.

‡ Receipts per acre of irrigated area.

Non-Tax Revenue:

In the current year, receipts from non-tax revenue aggregate to Rs. 17,52,64,000 or 31.44 per cent of the total revenue of this Province, and they have risen 3.9 fold in the last decade.

Changes in the Revenue Structure:

The changes in the yield of the principal heads of revenue in the last ten years are shown below:—

Heads of Revenue.	Yield (in lakhs)		Percentage to total revenue.		Increase in No. of times.
	1938-39	1949-50	1938-39	1949-50	
Tax Revenue:					
Land Revenue	513.37	530.75	31.82	9.52	1.03
Taxes on Income	22.50	789.30	1.39	14.16	35.08
General Sales Tax	...	1245.00	...	23.35	...
Motor Vehicles Taxation	81.2	189.33	5.03	3.40	2.33
Stamp Duty	173.37	437.82	10.75	7.85	2.53
Non-Tax Revenue:					
Forests	45.63	148.18	2.83	2.66	3.25
Registration	32.70	86.64	2.03	1.55	2.65
Irrigation Works	157.32	215.04	9.75	3.86	1.37
Electricity Projects	17.70	108.06	1.09	1.93	6.10

The revenue structure has undergone some striking changes. Land Revenue, the mainstay of the Provincial Finance till the pre-war year is no longer so. From 31.8 per cent of the total revenue in that year, its share has fallen to less than 10 per cent in 1949-50. The share of this Province in the Income-tax divisible pool, fixed at 18 per cent on the lines of the Neimeyer Award has increased from Rs. 22.5 lakhs in 1938-39 to Rs. 789.3 lakhs in 1949-50 or 35 fold. The yield from the General Sales Tax, though a comparatively recent find and landed on first by Madras, has progressively increased from Rs. 33.99 lakhs (half year revenue) in the first year of its imposition to Rs. 12.45 crores in the current year. It is hoped that the receipts from this tax would shortly exceed the revenue from Provincial Excise of Rs. 16.8 crores when it was at its zenith. Another growing source of revenue is the Motor Vehicles Taxation, but its share to total revenues has decreased from 5.03 per cent to 3.4 per cent in the last decade. Compared with other provinces, Madras derives the largest revenue from Stamp Duty which is more than 5 times that of C.P. and more than equal to the combined revenues of U.P. and Bihar. But its share is also diminishing in importance.

Revenues from Forest, Registration, Irrigation Works and Electricity Projects have all increased in absolute terms in the last decade but their shares to the total revenue have declined.

Per Capita Contribution:

The changes in the per capita contribution to revenue from these various heads may be seen in the following statement:—

Heads of Revenue	Per capita contribution 1938-39	1949-50	Increase in number of times.
Tax Revenue:			
Land Revenue	1 10 0 *	1 12 3 *	1.09
Taxes on Income	0 0 9	1 7 5	31.22
General Sales Tax	...	2 5 0	...
Motor Vehicles Taxation	0 2 9	0 5 7	2.03
Stamp Duty	0 5 10	0 13 0	2.23
Non-Tax Revenue:			
Forests	0 5 8 †	1 1 6 †	3.09
Registration	0 1 1	0 2 7	2.38
Irrigation Works	1 13 1 ‡	2 3 6	1.22
Electricity Projects	0 0 7	0 3 3	5.57

There has been an over-all increase in the per capita receipts of all the major heads of revenue; but adjusted to price changes, the real burden of per capita revenue has fallen by 28.8 per cent.

* Per acre of cultivated area.

‡ Per acre of irrigated area.

† Per acre of forest.

EXPENDITURE

Growth of Expenditure:

The estimated expenditure of the Government of Madras in 1949-50 is Rs. 55,66,09,000. From Rs. 16,09,72,000 in 1938-39, it has increased 3.46 fold. The rapid rise in pubilc revenues has been accompanied by an equally sharp rise in public expenditure. In spite of war-time austerity and postponement of even essential items of expenditure, the Province built up out of surpluses, a Reserve Fund of Rs. 29.40 crores only in the last 10 years, which would have been Rs. 238.74 crores, had expenditure remained at the pre-war level. The per capita expenditure has also correspondingly increased from Rs. 3-5-11 in 1938-39 to Rs. 10-5-5 in 1949-50 or by 3.07 times. Madras incurs the largest expenditure among the nine provinces of the Indian Union.

Classification of Expenditure:

The Government expenditure may be broadly divided into three classes. Security Services, concerned with maintenance of law and order—'the oldest of collective wants,'—Social Services aiming at bettering the environmental conditions of living and Developmental Services designed to improve the economic level of the community.

Security Services:

Expenditure incurred under the heads of General Administration, Justice, Jail and Convict Settlements and Police are included under Security Services. The expenditure on Security Services has increased from Rs. 551.57 lakhs in 1938-39 to Rs. 14,59.15 lakhs in 1949-50 or 2.65 fold. Though the aggregate amount spent is the largest among the provinces, per capita expenditure of Rs. 2-11-4 is lower than that of Rs. 4-15-0 in Bombay which is the highest. The

share of expenditure on Security Services in the total expenditure is 26.21 per cent compared with 32.27 per cent in Bihar.

Social Services:

The expenditure on Social Services—Education, Medical Aid and Public Health—in the current year is estimated at Rs. 1,293.12 lakhs, compared with Rs. 386.89 lakhs in 1938-39 registering an increase of 336 per cent. Per capita expenditure under Social Services has increased from Re. 0-13-0 in 1938-39 to Rs. 2-6-5 in 1949-50 or 2.96 fold. The amount spent on Social Services in Madras is exceeded by about Rs. 3.24 lakhs in Bombay. The share of expenditure on Social Services is 23.23 per cent of the total expenditure against 24.74 per cent in Bombay. The per capita expenditure on Social Services in Madras is less than half of the highest figure of Rs. 5-9-4 spent in Bombay and about two-thirds that of West Bengal, viz., Rs. 3-6-10.

Developmental Services:

Agriculture, Irrigation, Animal Husbandry, Co-operation, Industries, Electricity and Civil Works are the important Developmental Services in this Province. Expenditure on them too has risen from Rs. 194.53 lakhs to Rs. 1,212.70 lakhs or 6.23 fold in the last decade. Madras is second only to U.P. in the volume of expenditure on these Services, that in U.P. being Rs. 1,353.53 lakhs. The per capita expenditure has increased 5.53 fold from Re. 0-6-6 to Rs. 2-4-0.

Of the total expenditure, 21.79 per cent is spent in Madras in the current year on Developmental Services.

XVII. NATIONAL INCOME.

National Income:

In the current year, the National Income of the Province is estimated at Rs. 1,370.4 crores. In the decade between 1938-39 and 1949-50, the National Income of the Province has risen from Rs. 369.5 crores to Rs. 1,370.4 crores or 3.7 fold. This is 24.2 per cent of the National Income of the Indian Union which stands at Rs. 5,657.5 crores in 1949-50 *.

Per Capita Income:

The per capita income has also correspondingly increased from Rs. 77-5-11 in 1938-39 to Rs. 254-8-1 in 1949-50 or 3.3 fold. This is lower than that of Bombay and C.P. where it is Rs. 369-4-9 and Rs. 306-14-11 respectively.

Occupational Distribution of Income:

The share of the National Income of the Primary Services in Madras is Rs. 865.4 crores, the only other Province with the larger figure of Rs. 913.5 crores is U.P. In respect of the share of the Secondary Services too this Province with Rs. 213.6 crores ranks second, the first being Bombay with Rs. 224.8 crores. The share of the Tertiary Services amounting to Rs. 291.4 crores, and the largest among the nine provinces, is nearly twice as much as that of Bombay. A similar trend is noticed in the Per Capita Income also. The occupational distribution of National and Per Capita Incomes is tabulated below:—

**Vide* Dr. B. Natarajan: National Income and expenditure in India.

National and Per Capita Income in Madras in 1949-50.

Income	Income from			
	Primary Services	Secondary Services	Tertiary Services	All Services
National (Crores of Rs.)	865.4	213.6	291.4	1,370.4
Per Capita (Rs.)	239 14 0	305 2 3	270 11 11	254 8 1

Real Income;

The sharp rise in prices during the last decade has offset the advantages of this overall increase in National Income. Adjusted to this rise in prices, the National and Per Capita Real Incomes of the Province have fallen to Rs. 364.3 crores and to Rs. 67-10-5 in 1949-50 respectively. The National Real Income has fallen by 1.41 per cent and the per capita Real Income by 12.57 per cent.

Income	Income in		Real Income in	Percentage fall.
	1938-39	1949-50	1949-50	
National (Crores of Rs.)	369.5	1,370.4	364.3	1.41
Per Capita (Rs.)	77 5 11	254 8 1	67 10 5	12.56

Services	Expenditure (in lakhs) 1938-39	1949-50	Percentage to total 1938-39	1949-50	Per capita expenditure 1938-39			1949-50		
Security Services	551.57	1,459.15	34.26	26.21	1	2	6	2	11	4
Social Services	386.89	1,293.12	24.03	23.23	0	13	0	2	6	5
Developmental Services	194.53	1,212.70	12.08	21.79	0	6	6	2	4	0
Other Services	476.73	1,601.12	29.63	28.77	0	15	11	2	15	8
All Services	1,609.72	5,566.09	100.00	100.00	3	5	11	10	5	5

APPENDICES, MAPS AND CHARTS

APPENDIX I

Department of Agriculture.

Strength of the Staff.

	Permanent	Temporary	Total
GAZETTED OFFICERS.			
(*a*) *At Headquarters*:			
1. Director of Agriculture	1	...	1
2. Joint Director of Agriculture	...	1	1
3. Personal Assistant to the Director of Agriculture	1		1
4. Headquarters Deputy Director of Agriculture	1	3	4
5. Accounts Officer	...	1	1
6. Assistant Accounts Officer	...	1	1
7. Assistant Marketing Officer	...	2	2
8. Assistant Agricultural Engineers	...	2	2
9. Gazetted Assistant	...	1	1
Total ...	3	11	14
(*b*) *Marketing Section*:			
1. Provincial Marketing Officer	1	...	1
2. Assistant Marketing Officers	3	1	4
Total ...	4	1	5
(*c*) *Officers on District Work*:			
1. Dy. Director of Agriculture (Regional)	4	6	10
2. District Agricultural Officers	23	11	34
Total ...	27	17	44

(d) *Officers in charge of Research Stations:*

1. Superintendents	1	13	14
Total ...	1	13	14

(e) *Agricultural College:*

1. Principals	...	2	2
2. Senior Lecturer in Agriculture	1	1	2
3. Lecturers and Gazetted Assistant Lecturers including Estate Civil Engineer, Estate Mechanical Engineer and Lecturer in Animal Husbandry	4	19	23
4. Physiologist	...	1	1
Total ...	5	23	28

(f) *Specialists in Research Station:*

1. Fruit Section	1	1	2
2. Paddy Section	1	3	4
3. Cotton Section	1	5	6
4. Millet Section	1	3	4
5. Oilseed Section	1	...	1
6. Botany Section	1	...	1
7. Sugarcane Station at Anakapalle (excluding Superintendent)	...	5	5
8. Chemistry	6	2	8
9. Entomology	3	2	5
10. Mycology	1	5	6
11. Research Engineer	1	...	1
12. Bio-chemist	1	...	1
13. Pulses	...	1	1
Grand Total ...	58	93	150

II. Non-Gazetted.

(a) *Ministerial:*

	Permanent.	Temporary.	Total
1. Manager	1	...	1
2. Senior Superintendents	1	7	8
3. Accountant	...	1	1
4. Junior Superintendents	3	18	21
5. Accountant (Junior)			
6. Touring Superintendents	...	3	3
7. Auditors	...	4	4
8. Upper Division Clerks	15	243	258
9. Lower Division Clerks	106	559	665
10. Typists	16	53	69
11. Store-Keepers	6	624	630
Total ...	148	1,513	1,661

(b) ***Madras Agricultural Subordinate Service:***

	Permanent.	Temporary.	Total
1. Upper and Lower Subordinates.	374	353	727
2. Fieldmen	92	660	752
3. Demonstration Maistris	292	608	900
4. Artists	8	7	15
5. Draughtsmen	1	...	1
6. Sanitary Inspector	1	...	1
Total ...	768	1,628	2,396

(c) *Other Service:*

	Permanent.	Temporary.	Total
1. Laboratory Attendants	25	25	50
2. Mechanics	3	1	4
3. Museum Curator	1	...	1
4. Librarian	1	1	2
5. Assistant Librarian	...	2	2

	Permanent.	Temporary.	Total
6. Attenders	4	6	10
7. Assistant Engineering Supervisors	...	52	52
8. Tractor Foremen	...	24	24
9. Assistant Tractor Foremen	...	24	24
Total ...	34	135	169
(d) *Inferior Service:*			
1. Daffedars	1	...	1
2. Peons	141	472	613
Total ...	142	472	614
Grand Total ...	1,092	3,748	4,840

APPENDIX II

Department of the Chief Engineer (Irrigation).

*Strength of the staff.**

Name of Posts	Permanent	Temporary	Total
Chief Engineer	2	...	2
Dy. Chief Engineers	5	...	5
Personal Assistant to the Chief Engineer (General)	1	...	1
Superintending Engineers	10	...	10
Executive Engineers	59	...	59
Design Engineer	1	...	1
Assistant Engineers	245	...	245
Sanitary Engineer	1	...	1
Executive Engineers (Public Health)	6	...	6
Assistant Engineers (Public Health)	14	...	14
Chief Inspector of Boilers	1	...	1
Inspector of Boilers	6	...	6
General Superintendent	1	...	1
Assistant Superintendent	4	...	4
Junior Engineer (Electrical)	2	1	3
Personal Assistant Architect	1	...	1
Head Draftsmen	2	6	8
Architect Draftsmen	...	4	4
Draftsmen	223	101	324

* This includes the staff employed on other duty like Boiler Inspection, etc.

Name of Posts.	Permanent	Temporary.	Total.
Tracers	60	66	126
Blue Print Operators	4	6	10
Senior Superintendents	150	2	152
Junior Superintendents	7	9	16
Head Clerks	37	24	61
Upper Division Clerks	209	175	384
Lower Division Clerks	403	311	714
Typists	62	75	137
Stenotypists	16	8	24
I.C. Subordinate	401	14	415
Launch Driver	1	...	1
Plough Driver	1	...	1
Attenders	21	40	61
Peons	717	678	1,395
Supervisors	201	1,214	1,415
Store-Keepers	7	20	27
Divisional Accountants	30	29	59
Cashier	...	1	1
Electrician	9	3	12
Carpenter	...	2	2
Sub-Assistant Surgeons	...	2	2
Health Officer	1	...	1
Health Inspector	1	...	1
Midwives	2	...	2
Compounders	2	...	2
Wardboy	2	...	2
Foremen	...	6	6
Overseer	157	17	174
Time-Keepers	3	...	3
Physics and Soil mechanics	...	2	2

Name of Posts.	Permanent.	Temporary.	Total.
Clerk Typist	...	4	4
Laboratory Assistants	...	2	2
Mechanic	...	1	1
Stenographer	...	1	1
Artisan	...	1	1
Geologist	...	1	1
Chemist	...	1	1
Physist	...	1	1
Mathematics Assistants	...	3	3
Managers	8	4	12
Radio Engineers	1	1	2
Radio Engineers (Assistant)	...	1	1
Junior Van Supervisors	...	3	3
Telephone Operators	72	34	106
Boiler Mechanics	1	...	1
Copyist	1	...	1
Duffedar	1	...	1
Nursing Orderly	...	2	2
Total ...	3,172	2,876	6,048

APPENDIX III

Department of Industries and Commerce.

Strength of the Staff.

Name of Posts.	Number.
Director of Industries and Commerce	1
Joint Director of Industries and Commerce	1
Deputy Director of Industries and Commerce	1
Deputy Director of Cottage Industries	1
Personal Assistant to the Director of Industries and Commerce	1
Deputy Director, Marketing	1
Principals	10
Lecturers	35
Assistant Lecturers	67
Demonstrators	117
Instructors	121
Heads of Sections	20
Centre Khadi Officers	7
City Khadi Officer	1
Superintendents	37
Upper Division Clerks	132
Lower Division Clerks	418
Managers	53
Supervisors	72
Inspectors	237
Foremen	273
Mechanics	26

Name of Posts.	Number.
Chemists	16
Operators	116
Typists	59
Stenotypists	5
Attenders	48
Peons	320
Draughtsmen	3
Draftsmen	2
Tracers	4
Librarians	3
Teachers	12
Engineers	6
Auditors	7
Head Clerks	10
Store-Keepers	24
Translator	1
Editor	1
Drivers	23
Cleaners	7
Assistants	56
Designers	6
Drawing Master	1
Special Officers	2
Provincial Textile Commissioner	1
Assistant Textile Commissioners	3
Textile Control Officers	26
Assistant to the Hony. Regional Khadi Officer	3
Accounts Officer	1
Silk Testing Officer	1

Name of Posts.	Number.
Assistant Welfare Officer	1
Assistant Engineers	3
Sericultural Experts	2
Assistant Sericultural Experts	2
Assistant Marketing Officers	4
Research Officer	1
Assistant Research Officer	1
Propaganda Officer	1
Others	314
Total ...	2,728

APPENDIX IV

Highways Department.

Strength of the Staff.

Name of posts	Permanent	Temporary	Total
Chief Engineer	1	...	1
Superintending Engineers	3	2	5
Divisional Engineers	28	14	42
Assistant Engineers	97	58	155
Supervisors	367	265	632
Managers	4	2	6
Superintendents	5	4	9
Head Clerks	3	2	5
Draftsmen	144	41	185
Upper Division Clerks	250	114	364
Lower Division Clerks	345	104	449
Typists	43	31	74
Attenders	404	26	430
Peons	833	206	1,039
Divisional Accountants including training posts	48	...	48
Tracers	33	16	49
Total ...	2,608	885	3,493

APPENDIX V

Department of Electricity.

Strength of the Staff.

Name of posts.	Number.
Chief Engineer	1
Consulting Engineer	1
Chief Operation Engineers	2
Chief Construction Engineer	1
Superintending Engineers	6
Divisional Engineers	14
Assistant Engineers	78
Junior Engineers	156
Executive Engineers	3
Personal Assistants and Technical Assistants	3
Supervisors	142
Accountants	35
Draughtsmen	50
Tracers	29
Special Officer for Hydro-Electric Surveys	1
Chief Controller of Accounts	1
Stock Verifiers	5
Others	1,114
Superintendents	11
Total ...	1,653

APPENDIX VI

Co-operative Department.

Strength of the Staff.

Name of posts.	Number.
Registrar	1
Joint Registrars	4
Deputy Registrars	44
Sub-Registrars	130
Sub-Registrar Managers	2
Inspectors (Senior & Junior)	1,720
Deputy Collector	1
District Veterinary Officer	1
Superintendents	4
Deputy Tahsildars	3
Dairy Development Officer	1
Dairy Experts	17
Dairy Surveyors	11
Technical Expert	1
Accounts Officer	1
Special Development Officers	24
Chief Physical Instructors	2
Provincial Palm Gur Adviser	1
Manager	1
Woman Special Officer	1
Assistant Development Officers	48
Rural Welfare Officers	217
Others	1,168
Total ...	3,404

APPENDIX VII

Department of Animal Husbandry.

Strength of the Staff.

Name of posts.	Number.
Director of Animal Husbandry	1
Joint Director of Animal Husbandry	1
Personal Assistant to the Director	1
District Veterinary Officers	28
Veterinary Assistants	355
Veterinary Assistant Surgeons	22
Deputy Tahsildar	1
Principal	1
Resident Veterinary Officer	1
Lecturers & Assistant Lecturers	27
Laboratory Assistants & Demonstrators	7
Veterinary Investigation Officers	3
Research Officer	1
Livestock Development Officers	3
Farm Manager and Assistant Managers	3
Dairy Assistant	1
Poultry Officers	2
Senior Inspector	1
Others	671
Senior & Junior Superintendents	7
Total ...	1,147

APPENDIX VIII

Firka Development Department.

Strength of the Staff.

Name of posts.	Number
Provincial Firka Development Officer	1
Regional Firka Development Officers	2
Firka Development Officers	34
Village Development Officers	157
Clerks	46
Peons	42
Special Revenue Inspectors	2
Steno Typists	2
Principals	2
Agricultural Teachers	2
Co-operative Experts	2
Veterinary Assistant Surgeons	2
Assistant to the Principal	1
Khadi Experts	2
Workshop Managers	2
Weaver, Blacksmith, Carpenter & Potter	8
Manager-cum-Accountants	2
Typist Clerks	2
Senior Co-operative Inspectors	2
Office Boys	2
Total ...	315

APPENDIX IX

Department of Education.

Strength of the Staff.

Name of posts	Number
Director of Public Instruction	1
Joint Director	1
Deputy Directors	3
Personal Assistants	18
Inspectors and Inspectresses of Schools	18
Education Officers	30
Special Officers	3
Senior Deputy Inspectors	590
Principals	16
Vice-Principals	3
Chief Professors	17
Professors	40
Lecturers	91
Assistant Professors (Lecturers and Instructors)	378
Teachers, Pandits and Instructors	2,339
Headmasters and Headmistresses	68
School Assistants	51
Demonstrators	120
Tutors	60
Librarians	15
Assistant Surgeons	7
Superintendents	28
Others	3,756
Total ...	7,651

APPENDIX X

Department of Medicine.

Strength of the Staff.

Name of posts.	Number.
Surgeon-General	1
Personal Assistant to Surgeon-General	1
Managers	5
Superintendents	22
Clerks	469
Typists and Steno Typists	37
Attenders	40
Daffadars	7
Peons	358
Assistants	11
District Medical Officers	25
Civil Surgeons	30
Civil Assistant Surgeons	566
Women Civil Surgeons	4
Women Civil Assistant Surgeons	159
Matrons	28
Sisters	130
Nurses	1,454
Watchmen	78
Accountants	20
Cashiers	2
Compounders	646
Attendants	531

Name of posts.	Number.
Midwives	383
Nuns	18
Gardeners	114
Ayahs	49
Barbers	19
Butlers & Cooks	352
Dhobies	205
Totis	22
Secretary and Treasurers	12
Tutors	49
Health Visitors	7
Pharmacists	29
Artists	9
Radiographers & Radiologists	35
Dark-room Assistants	20
Store-Keepers and Linen-Keepers	27
Stretcher-bearers	38
Resident Medical Officers	10
Principals	2
Professors	139
Lecturers	58
House-keepers	37
Weighmen	8
Luscars	169
Nursing Orderlies	1,571
Store-keepers	27
Mechanics	32
Theatre Assistants	35
Research Officers	4
Health Officers	2
Overseers	14

Name of posts.	Number
Technicians	65
Laboratory Assistants	11
Demonstrators	68
Pathologists	9
Electricians	22
Physical Director	4
Drivers	45
Stewards	29
Readers	9
Teachers	18
Others	48
Reserve Civil Assistant Surgeons	79
Telephone Operators	2
Total ...	8,578

APPENDIX XI

Department of Public Health.

Technical personnel only.

Director of Public Health	1	
Assistant Directors of Public Health	6	
Assistant Directress of Public Health (Maternity & Child Welfare)	1	
First-class Health Officers	80	
Second-class Health Officers	106	
Health Inspectors in charge of ranges	280	
Health Inspectors on other temporary duties	280	
Vaccinators	913	(women 53)
Total ..	1,667	

APPENDIX XII

Department of Economics and Statistics.

Strength of the Staff.

Name of posts.	Number.
Economic Adviser	1
Statistics Authority	1
Statistical Officer	1
Research Officer	1
Gazetted Personal Assistant to E.A.	1
Assistant Statistical Officer	1
Senior Superintendents	5
Economic Investigators	18
Junior Superintendents	8
U.D. Clerks	21
L.D. Clerks	23
Stenographer	1
Typists	11
Senior Draftsman	1
Junior Draftsman	6
Attender	1
Peons	38
Total ..	139

APPENDIX XIII

Publications by the Department of Economics and Statistics.

1. Agrarian Reforms and Parity Economy by the Hon'ble Sri O. P. Ramaswamy Reddiar (Ex-Premier of Madras). Published by the Economic Adviser, Madras.

2. A Scheme of Crop Insurance for the Madras Province by Dr. B. Natarajan, M.A., D.LITT., Economic Adviser to the Government of Madras with an introduction by Hon'ble Sri O. P. Ramaswamy Reddiyar, Ex-Premier of Madras.

3. Inflationary Pressure and Economic Recovery.

4. Pokkuvarathum and Poruladharamum (in Tamil).

5. The Economic Wealth of Tamilnad.

6. The New Economics.

7. International Peace and the Role of the United Nations Organisation.

8. The Ryot's Illusory Surplus.

9. Stabilisation of Agricultural Prices.

10. National Income of Madras.

11. Evidence given before the Agrarian Reforms Committee.

12. Prices and Prosperity in Agriculture.

13. Grow More Food Campaign in Madras (Paper presented at the All-India Agricultural Economic Conference, December 1948, Hyderabad-Deccan).

14. Economic Tolerance.

15. Industrial Statistics.

16. Cost of Living Indices.

17. A Statistical Assessment of the Grow More Food Campaign in the Madras Province.

18. Labour Disputes in the Province of Madras, during the 3 years 1945-47—A Statistical Analysis.

19. Foreign Capital and Enterprise for Backward Economies.

20. National Income and Public Expenditure in India—An Analysis in Provincial Finance. Price Rs. 3. (Superintendent, Government Press).

21. Five hundred Crore Rupees Plan for the Province of Madras.

22. Absenteeism in organised Industries in the Madras Province—Statistical Analysis.

23. Wages and Industrial Output.

24. Mineral Wealth of the Province.

25. Memorandum on cultivation of sugarcane in the Province of Madras.

26. Decennial Statistical Atlas for the Madras Province. Price Rs. 75. Superintendent, Government Press.

27. Madras Finances (in Tamil, Telugu, Malayalam and Canarese).

The following reports are periodically issued by the Department:—

1. Crop Forecast reports on paddy, cotton, sugarcane, groundnut, gingelly, castor, pepper, ginger, etc.

2. Wholesale price index for Madras City (Monthly).

3. Wholesale prices of certain commodities in Madras Province (Fortnightly).

4. Season and Crop Report for the Madras Province.

5. Retail Price of certain commodities in the Madras Province for the last week of the month (Monthly).

6. Index numbers of Cost of Living for nine urban centres in the Province.

7. Rural Price indices for thirteen centres in the Madras Province (Monthly).

8. Statement of retail prices of foodgrains and salt (Monthly)

9. Monthly and Annual Rainfall recorded in the Madras Province.

10. Statement of prices of commodities which were included in the Zonal Scheme.

APPENDIX XIV

Pay of Officers and Establishment including Allowances and Honoraria (1949–50).

(*in lakhs of Rupees.*)

Serial No.	Major head of account.	Pay of Officers.	Pay of Establishment.	Allowances and Honoraria.	Total.
1.	Land Revenue	1.47	7.99	6.18	15.64
2.	Provincial Excise	3.41	31.94	29.08	64.43
3.	Stamps	...	0.19	18.40	18.59
4.	Forest	5.55	33.69	15.56	39.53
5.	Registration	1.57	33.69	15.12	50.38
6.	Charges on account of Motor Vehicles Act	0.53	2.47	2.89	5.89
7.	Other Taxes & Duties	2.32	17.24	12.38	31.94
8.	Irrigation	2.62	1.23	...	3.85
9.	General administration	14.33	24.48	13.81	52.62
10.	Legislative Bodies	11.59	...	9.01	20.60
11.	District administration and miscellaneous	15.73	257.23	124.85	397.81
12.	Administration of Justice	28.19	61.51	41.25	130.95
13.	Jails and convict settlements	1.62	11.63	7.18	20.43
14.	Police	14.33	278.25	232.55	525.13
15.	Ports and pilotage	.15	.52	.34	1.01
16.	Education	13.99	58.65	30.69	103.33

Serial No.	Major head of account.	Pay of Officers.	Pay of Establishment.	Allowance and Honoraria.	Total.
17.	Medical	23.64	46.55	45.14	115.33
18.	Public Health	6.34	15.56	12.72	34.62
91.	Agriculture	5.78	20.13	13.51	39.42
20.	Veterinary	2.64	10.15	8.27	21.06
21.	Co-operation	3.33	29.77	21.06	54.16
22.	Industries and Supplies	4.21	20.01	12.41	36.63
23.	Industries and Supplies—Chinchona & Fisheries	1.08	7.62	8.74	17.44
24.	Miscellaneous Departments	3.45	37.69	26.60	67.74
25.	Civil Works	22.80	52.03	39.34	114.17
26.	Electricity Schemes	5.52	11.50	7.77	24.79
27.	Other Revenue expenditure connected with Electricity schemes	2.36	2.70	2.03	7.09
28.	Famine	...	0.01	0.01	0.02
29.	Stationery & Printing	0.59	10.27	7.42	18.28
30.	Miscellaneous	0.67	15.34	11.59	27.60
31.	Extraordinary charges	4.13	34.28	34.78	73.19
	Total ...	203.94	1119.05	810.68	2133.67

APPENDIX XV

Money and Real Burden of Provincial Revenues.

Province.	1938—39 Per Capital burden Rs.	1949—50 Money Burden Rs.	1949—50 Real burden Rs.	Percentage fall or rise in real burden.
Madras	3 5 4	8 14 3	2 5 10	−28.8
Bombay	5 15 0	17 1 0	4 8 7	−13.6
Central Provinces	2 8 8	9 1 4	2 6 8	−4.9
United Provinces	2 5 4	7 12 7	2 1 1	−11.4
Bihar	1 6 10	4 11 0	1 4 8	−10.2
Assam	2 8 10	6 10 4	1 12 3	−30.8
Orissa	2 1 6	7 13 7	2 1 4	− 0.5
East Punjab	4 2 11	12 0 4	3 3 0	−23.79
West Bengal	2 3 0	12 5 7	3 4 5	+49.76

PLACES OF IMPORTANCE AND INTEREST IN THE PROVINCE OF MADRAS.

CHIDAMBARAM:

Chidambaram lies between the river Vellar on the north, the Bay of Bengal on the east, the Coleroon on the south and Viranam tank on the west. The temple is one of the most important in South India and devotees from all parts of the country visit the place all through the year. The idol of Nataraja (Siva in his dancing pose) is separated from the Holy of Holies by a veil which is removed only on specified occasions of worship. The temple is famous for the Chit Sabha, four courts, the huge image of Nandi, the fine architectural carvings on the niches of the four main outer gopuras, the holy Sivaganga tank with attractive colonnade around it, and the shrine of Govindaraja Perumal who is also said to have witnessed the dance of Siva. The Gopura on the northern entrance is said to have been built by Krishna Devaraya of Vijayanagar in commemoration of his victory over the King of Orissa.

The Annamalai Residential University is situated here.

COIMBATORE:

Coimbatore, about 300 miles from Madras, is about 1,350 feet above sea level and enjoys an exhilarating climate all through the year. It has 35 textile mills and is known as the Manchester of the South. The Agricultural College and Research Institute and the Forest College are located here.

CONJEEVERAM:

Conjeeveram (45 miles south west of Madras) known as Kanchi or Golden City, one of the seven holy cities of India (Saptapuris), is

sacred to worshippers of Siva and Vishnu alike. It is the best place for a close study of the antiquarian remains of Southern India. Saivaism, Vaishnavism, Buddhism and Jainism, have all had their influence here in turn. At one time the city is said to have possessed 108 Siva temples and 18 Vishnu temples. The western "Little Conjeeveram" or "Vishnu Conjeeveram" is famous for Vishnu and the eastern "Big Conjeeveram" or Siva Conjeeveram for Siva temples.

Tirupparuttikunram, a village few miles from Conjeeveram, is of Jain antiquarian interest; there are found ruins of Buddhists and Jain temples.

COURTALLAM:

Courtallam, described as the Spa of the South, is famous for its water falls and salubrious climate. This sanatorium has several waterfalls; the big falls and the five falls are at the foot of the hills easily accessible to bathers and two more up the hills known as Shenbagadevi falls and Honey falls. Courtallam is also a great pilgrim centre with an ancient Siva temple.

GINGEE:

This ancient fortified city is closely connected in popular tradition with Desing Raja. It is situated to the west of Tinidvanam in South Arcot district. Gingee, the seat of Government of a former Vijayanagar king is one of the few ancient places of historic interest which has been preserved in all its ancient glory. The fortress consists of three strongly fortified hills in close proximity to each other, Rajagiri, the residence of the Raja in Sukla Paksha, Krishnagiri in Krishna Paksha and Chandrayandrug, prison fortress.

HAMPI:

Hampi marks the ruins of the magnificient capital of the "Forgotten Empire" of Vijayanagar Rayas. The reputed capital of the Kingdom of Kishkinda, at a distance of 7 miles from Hospet in Bellary district, Vijayanagar played an important part in the history of India. The stone aqueducts, constructed for the supply of water from a large tank to the principal buildings of the city testify to the genius in town planning of the age.

The outer walls of the Hazara Rama Temple contain several bas-reliefs depicting scenes from the Ramayana and the Mahabaratha. The fine Monolithic statue of Narasimha is about 25 feet in height. The Vittalaswami temple and the Krishnaswami temple are famous for their architectural beauty.

KODAIKANAL:

It is the second important hill station and sanatorium in the Province. It is situated on the Palni hills at an elevation of some 7,000 feet above sea level. The hill station is famous for the beautiful lake, promenade, the silver cascade and Glenn Falls, and several beauty spots. A Government observatory is located here.

KUMBAKONAM:

This town derives its name from the presiding deity Kumbesvara. The Mahamaka festival which comes off once in 12 years, draws pilgrims from all parts of the country, and a bath in the Mahamaka tank is considered very sacred. That it was once the capital of Cholas is supported by the ruins of an ancient structure in a suburban village called Solamaligai or the palace of Cholas. There are 18 large temples around this town within a radius of 10 miles.

MAHABALIPURAM *:

"Mamallapuram (Mahabalipuram) and the neighbouring well known shrine Tirukkalukunram (otherwise known as Pakshithirtham) were great centres of culture and religious revival in the Pallava age. On the hills near Tirukkalukunram the sacred kites are fed daily at noon. Mamallapuram popularly known as Mahabalipuram and Mavalivaram and as the Seven Pagodas to the Europeans was named after the Pallava King, Mahamalla Narasimhavarman, a powerful ruler of Kanchi, in the seventh century A.D. who probably built or enlarged it.

The place must have been famous even before the time of the Pallavas. The monuments for which it is now noted fall into three classes (1) Monolithic rock-cut shrines popularly known as rathas; (2) caves excavated out of the rock on hill sides and ornamented with pillars and sculptured panels; and (3) structural buildings and temples. The rathas are the most interesting of the monuments and are called after the Pandava Brothers and their wife Draupadi; but originally they were intended to be shrines dedicated to Siva. They are the earliest examples of the monolithic structures carved out of single stone boulders which are available in South India. The caves are interesting, particularly the Varaha Cave dedicated to the Boar incarnation of Vishnu. It contains the sculptured figures of two Pallava kings along with those of their queens. A large sculpture on the face of a rock at the place has excited much interest among scholars and is said to represent either Arjuna's penance before Siva or the descent of the Ganges. Of the ruined stone-temples at the place—there were probably more of them,—there is now only one survival, viz., the shore temple, with its double vimana. The place was possibly visited by Hiuen Tsiang, the famous Chinese traveller of the seventh century, who mentions it as the port of Kanchi which he described as a great city with a large number of Buddhist monks living therein *."

* C. S. Srinivasachari: History of Madras City.

MATHURAI:

Known as Kadambavanam or the forest of Kadamba in ancient times, it was the capital of the ancient Pandya Kings. It is known as the city of festivals. Said to have been built in the reign of Viswanath Naik, it testifies to the art of town planning in ancient India.

The great Meenakshi temple in the centre of the city, is a wonderful work of art. The Ayirakkal or 1,000-pillared mandapam, the Ashtasakti mandapam, the Puthu mandapam, with its elaborately sculptured pillars, the rare representation of Nataraja dancing with the right foot on the ground and several other sculptures and bas-reliefs, images and architecture have won the admiration of connoisseurs of art.

The jewellery of God Sundaresa and Goddess Meenakshi are one of the finest and most valuable collections in Southern India.

Tirumalnaickmahal, a palace of the Naik rulers is famous for the stucco work in the domes and arches. The portico in the front goes by the name of "Swarna Vilasam" or the celestial pavilion. Mathurai was the famous seat of the Tamil Academy (Sangams) which flourished about two thousand years ago.

Mathurai is the second largest city in the Province. Cotton textile industry is well established. It is famous for its cotton and silk handloom fabrics. It is also fast developing into a great educational centre.

METTUR:

Situated about 20 miles from Salem, it is the place where the great hydro-electric and irrigation works have been built across the Cauvery. Cotton textile and heavy chemical industries are located here.

OOTACAMUND:

Popularly known as Ooty, this Queen of hill stations in India, is situated at about 7,400 feet abov the sea level. It was formerly the summer capital of the Province.

PALNI:

Palni or Palani in Madura district is the most important hill shrine dedicated to God Subrahmanya, an aspect of Siva. The temple stands on a picturesque hill, a continuation of the Kodaikanal Range.

PAPANASAM:

Papanasam in Tirunelveli district is at the foot of Pothigai hills, famous as the abode of the Sage Agastya. The hills have several magnificient water-falls of which old Papanasam, Kalyani Thirtham and Vanathirtham are famous. A hydro-Electric Project has been constructed here to harness the waters of Tamravarni.

RAMESWARAM:

Rameswaram is an island off the mainland connected by the Madras-Dhanushkodi line. The temple, containing Ramanathaswami shrine, has several tanks and wells, to which great sanctity is attached. This temple, an excellent example of Dravidian architecture, is in the form of a quadrangular enclosure, 667 feet broad and 1,000 feet long. Its vast pillared corridors extending to nearly 4,000 feet are a marvel of titanic architecture.

SRIRANGAM:

Srirangam, situated 3 miles to the north of Tiruchirapalli is a picturesque island lying between two branches of the river Kaveri. The great Ranganatha temple lies in the heart of the island.

TIRUCHIRAPALLI:

Tiruchirapalli, known as Dakshina Kailas, is the headquarters of the South Indian Railway. The famous Rock Temple stands within the spacious Fort which forms the city's nucleus. Rising sheer from the plain to a height of 273 feet, it is ascended by a covered stone staircase, entered through a carved and ornamented gateway with steps of four flights.

Uraiyur, an ancient capital of the Cholas, is at a distance of two miles. In the Anglo-French Wars, siege of Tiruchirapalli Fort marked a turning point.

JAMBUKESWARAM:

Known as Tiruvanakkaval, it is 2 miles to the north of Tiruchirapalli. The deity in the Jambukeswaram temple is known as Appu Linga or the Water Linga, because the image in the Garbagriha (sanctum) is always in water, a phenomenon quite curious and inexplicable.

TANJORE:

Tanjore, at the head of the Cauvery Delta, is appropriately called "the Garden City of India." It was the capital of the Imperial Cholas and later the Mahratta rulers of the South. The palace at the centre of the town is a noble structure with a famous library, called Saraswathi Mahal, containing rare palm-leaf works, paintings, works of art and curios.

TIRUCHENDUR:

The temple at this place dedicated to Subramanya, the warrior aspect of Siva is built on a small rock washed by the sea. There are some rock cut temples and natural caves by the sea-side close to the

temple. The temple is said to have been built by Ugrapandyan the 15th descendant of the Pandyan dynasty of Mathurai. It attracts pilgrims all through the year from all parts of the country.

TIRUPATHI:

This famous hill shrine is sacred to Vishnu, known as Sri Venkateswaraperumal or Srinivasaperumal. The shrine stands over a cluster of 7 hills, said to form a part of Mount Meru. Hindu conception regarding the chain of these hills is that they represent the body of the serpent Lord Adisesha on which God Vishnu, the protector of the world is said to rest. The seven hills of Tirupathi are said to represent the seven heads of the serpent, on which Venkatachalapathi stands, the centre of the serpentine body the seat of Ahobala Narasimha and the tail end the abode of Mallikarjuna of Srisaila. In the gopura or tower down-hill several puranic legends are commemorated in sculpture; added to these, statues of king Krishna Devaraya of Vijayanagar and his consorts Chinnadevi and Tirumaldevi are in a separate shrine on the top of the hill, within the temple. To the left of the Gopura, there is a figure of Venkatapathi Raju (A.D. 1586-1613), who removed the seat of Vijayanagar dynasty to Chandragiri.

TIRUVANNAMALAI:

This town is famous for the worship of the fire Linga installed there. The famous gopura or gate tower consists of 11 storeys. The construction of the temple was commenced by Krishna Devaraya about the year 1516 A.D. and completed by King Sevappa Naik of Tanjore.

AGRICULTURAL RESEARCH STATIONS:

The following places have gained importance due to the establishment of specialised research institutes by Government. The Pomo-

logical station dealing in sub-tropical fruits is situated at Coonoor and Nilgiris, Potato research station at Nanjanad, in Nilgiris, Sugarcane research station at Anakapalle in Visakhapatnam district, Paddy breeding station at Tiruru in Chingleput district, Coconut research station at Nileshwar in South Kanara district, Groundnut research station at Tindivanam, and Fruit research station at Kodur, Cuddapah district. Research on various aspects of Agriculture is undertaken at the Agricultural Research Institute attached to the College at Coimbatore.

LIVESTOCK RESEARCH STATIONS:

There are 11 livestock stations in the Province. The Livestock Research Station at Hosur in Salem district is situated on a farm of about 1,600 acres where Scindhi, Kangayam and Hallikar breeds of cattle are maintained in addition to a flock of sheep, some fowls of foreign breed like White Leg Horn, Rhode Island, Red and Black for the production of eggs and cockerels for breeding purposes. In the research station at Lam in Guntur district, Ongole cattle and Murrah buffaloes are maintained for breeding purposes besides poultry. The combined Sheep and Cattle Farm at Kurukuppi in Bellary district maintains Hallikar Cattle and Bellary Sheep for breeding purposes. The Dairy Farm at Visakhapatnam located in an area of 250 acres, is the first to be opened by the Government. Murrah and Jaffabadi buffaloes are maintained in this farm. A Sheep Farm covering an area of about 600 acres for improving the breed of the woolly sheep of Nilgiris is maintained in Dumsandle area, 5 miles from Ootacamund.

At Kambakkam Kancha where adequate grazing facilities are available, a salvage farm has been opened to salvage milch animals which have gone dry. This scheme is worked by a co-operative society in Madras which collects the dry cows and sends them to the Farm.

A fee of Rs. 7-8-0 per mensem is charged per animal. The cows are served by approved bulls and are returned to the owners after calving.

The Pattagar's Farm, Palayakottai is situated at a distance of 21 miles from Erode. It is owned by the Pattagar of Palayakottai, an expert breeder of Kangayam Cattle.

There are 3 District Poultry Farms at Cannanore, Chittoor and Cuddapah and a Poultry research station at Teynampet where eggs, cockerels and pullets are also sold for breeding purposes.

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Receipts on Revenue Account of the Madras Province.

(In lakhs of Rupees)

HEAD		1947-48	1948-49 (R.E)	1949-50 (B.E.)
Taxes on Income other than Corporation tax	...	535.32	842.22	789.30
Land Revenue	...	530.43	491.63	530.75
Provincial Excise	...	1069.18	381.30	40.01
Stamps	...	335.92	447.46	437.82
Forests	...	182.81	165.88	148.18
Registration	...	78.90	86.14	86.64
Receipts under Motor Vehicles Act	...	166.64	189.41	189.33
Other Taxes and Duties	...	1029.78	1429.20	1835.47
Irrigation	...	202.43	199.21	215.04
Other heads of Accounts*	...	261.67	315.36	299.51
Industries	...	72.49	93.69	104.38
Miscellaneous Departments	...	17.14	21.36	20.27
Civil Works	...	111.27	63.04	75.60
Electricity Schemes	...	62.31	101.60	108.06
Miscellaneous	...	116.76	178.79	193.49
Extraordinary receipts†	...	298.05	332.08	501.47
Transfer from Revenue Reserve Fund	...	...	366.00	...
TOTAL	...	5071.10	5704.37	5575.32

* Include receipts from Interest, Administration of Justice, Jails and convict settlements, Police, Posts and Pilotage, Education. Medical, Public Health, Agriculture, Veterinary, Co-operation, receipts in aid of super-annuation, stationery and printing, miscellaneous adjustments between Central and Provincial Governments and Civil Defence.

† Include subscriptions from the Central Government for development schemes, small savings scheme, receipts of the Provincial Motor Transport Controller, receipts of the Board of Revenue and receipts of the Industries Department.

N.B.—R.E = Revised Estimate; B.E = Budget Estimate.

Expenditure On Revenue Account of The Madras Province.

In Lakhs of Rupees.

HEADS.		1947–48	1948–49 R. E.	1949–50 B. E.
Charges on account of Motor vehicles act	...	96.47	100.97	95.74
Other taxes & duties	...	87.03	120.12	123.07
Irrigation	...	206.53	244.27	399.45
Appropriation for reduction or avoidance of debt	...	142.78	69.88	75.67
General Administration	...	560.39	705.12	631.87
Administration of justice.		145.64	148.82	141.27
Jails & convict settlements	...	79.63	90.53	81.47
Police	...	464.81	717.99	604.54
Education	...	703.70	886.63	38.93 •
Medical	...	238.49	262.53	254.01
Public Health	...	190.51	94.63	100.18
Agriculture	...	116.93	193.10	136.24
Veterinary	...	31.81	45.87	43.64
Co-operation	...	42.69	57.77	61.32
Industries & supplies	...	112.75	153.58	256.07
Miscellaneous Departments	...	119.81	115.53	112.27
Civil works	...	464.01	526.47	715.43
Expenditure on Electricity schemes	...	52.85	69.78	93.38
Superannuation allowance & pensions	...	159.48	164.44	169.51
Stationery & printing	...	49.42	85.40	78.99
Extraordinary charges	...	168.50	446.66	138.15
Transfer to reserve Fund.		510.00	...	...
Civil Defence	...	20.29	1.12	...
Other heads of Accounts	...	304.04	402.87	304.89
Total	...	5068.56	5704.08	5566.09

* Include free distribution of milk, compensation payable in India to Secretary of State's officers, small savings scheme, motor spirit rationing scheme, control of motor transport, price control, Central Grain Reserve and Sailors', Soldiers' and Airmen's Board.

* Include expenditure on land revenue, provincial excise, stamps, forests. registration, interest on debt, ports and pilotage, scientific departments, famine and miscellaneous.

N. B.—R.E. = Revised Estimate; B.E. = Budget Estimate.

Per Capita Money and Real Income in the Provinces and Indian Union in 1938-39 and 1949-50.

Provinces.	Per Capita Income. 1938–1939 Rs.	As.	P.	1949–50 Rs.	As.	P.	Per Capita Real Income Rs.	As.	P.	Percentage increase or decrease in real income of 49–50 Compared with 1938–39
Madras	77	5	11	254	8	1	67	10	5	– 12.56
Bombay	115	4	1	369	4	9	98	2	8	– 14.83
Central Provinces	84	15	5	306	14	11	81	9	5	– 3.96
United Provinces	59	0	9	209	1	3	55	9	3	– 5.88
Bihar	41	5	9	147	11	6	39	4	3	– 5.06
Assam	62	1	6	225	9	9	55	15	6	– 3.42
Orissa	65	5	7	224	12	3	59	11	11	– 8.58
East Punjab	70	13	0	221	15	9	59	4	4	– 16.30
West Bengal	50	4	9*	153	1	8	40	11	2	– 19.08
Indian Union	67	8	10*	228	10	0	60	12	0	– 11.10

* Estimated Income of the divided Province.

CAPITAL EXPENDITURE.

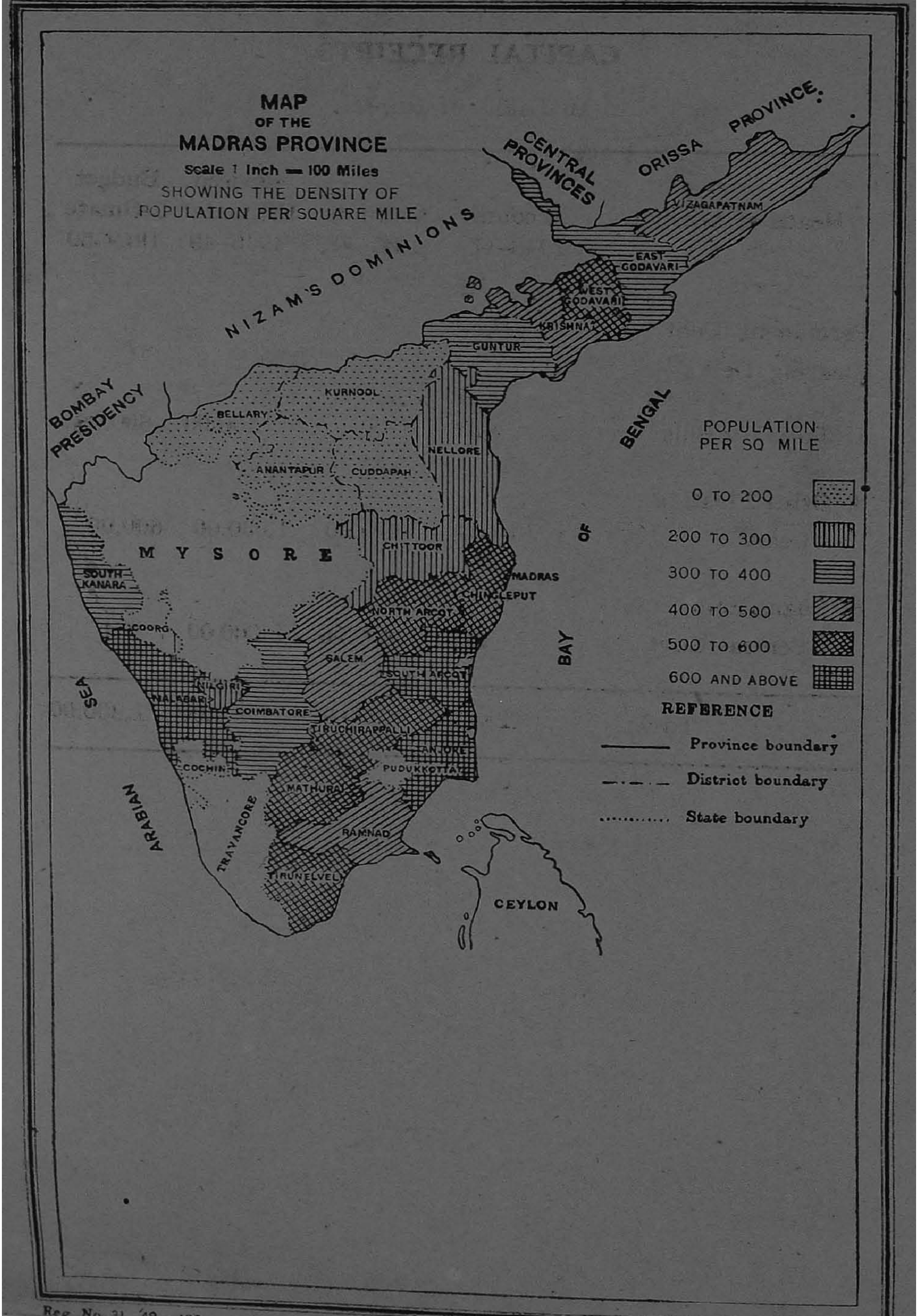
In Lakhs of Rupees.

Heads of Account.	Accounts 1946-47	Accounts 1947-48	Revised Estimate 1948-49	Budget Estimate 1949-
Construction of Irrigation, navigation, embankment and Drainage Works	60.24	142.51	256.71	400.36
Capital outlay on Industrial Development	13.98	13.71	128.62	107.93
Capital Account of Civil Works outside the Revenue Account	10.72	9.66	18.69	129,46
Capital Outlay on Electricity Scheme	100.85	425.76	601.80	601.10
Capital Account of other Provincial Works outside the Revenue Account	2.76	30.68	30.61	...
Payments of commuted value of pensions	...	...	...	...
Capital outlay on Provincial Scheme of State Trading	...	...	...	...
TOTAL	188.55	622.32	1,036.43	1,238.85

National Money and Real Income in 1938-39 and 1949-50 in the Provinces and Indian Union.

Provinces.	National income in crores. 1938–39	National income in crores. 1949–50	National Real income in 49-50 (in crores)	Percentage increase or decrease in Real income of 49-50 Compared with 1938-39
	Rs.	Rs.	Rs.	
Madras ...	369.5	1370.4	364.3	– 1.41
Bombay ..	235.8	857.1	227.8	– 3.39
Central Provinces ...	140.0	558.8	148.5	+ 6.07
United Provinces ...	318.4	1245.7	331.1	+ 3.99
Bihar ...	147.3	581.3	154.5	+ 4.89
Assam ..	62.1	249.3	66.3	+ 6.76
Orissa ...	55.9	212.9	56.6	+ 1.25
East Punjab ..	66.6*	257.5	68.5	+ 2.85
West Bengal ...	86.8*	324.5	86.3	– 0.58
Indian Union ...	1482.4	5657.5	1503.9	+ 1.45

* Estimated Income of the divided Province.



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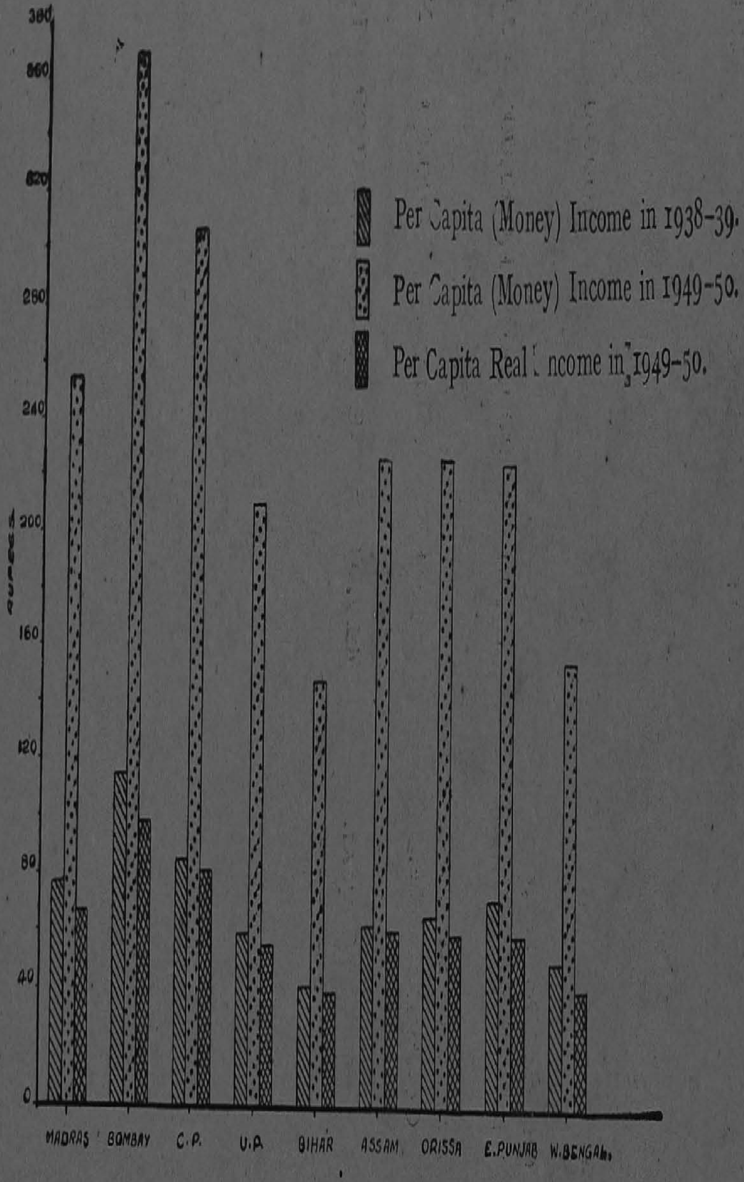
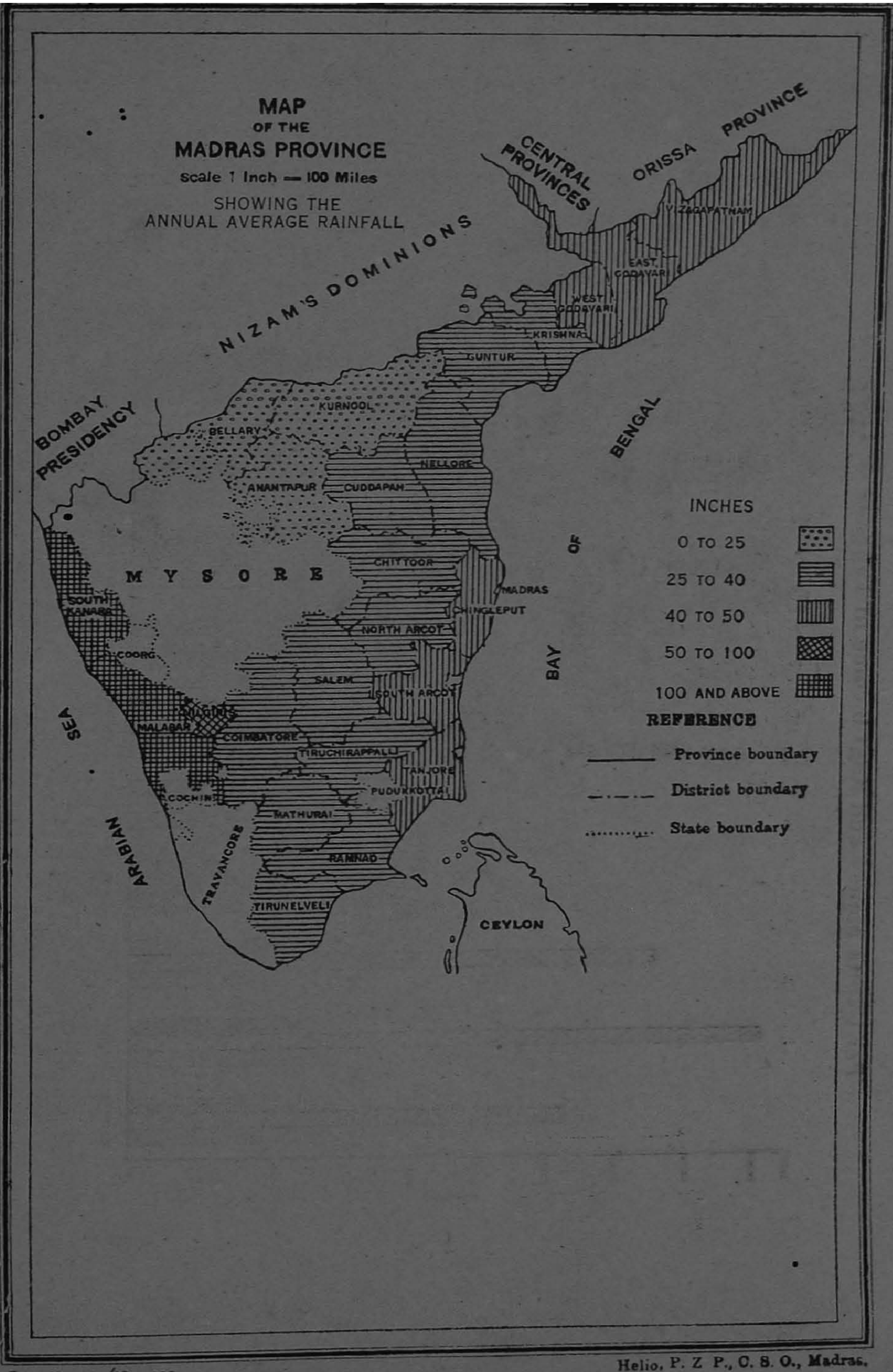
CAPITAL RECEIPTS.

In Lakhs of Rupees.

Heads of Account.	Accounts 1946-47	Accounts 1947-48	Revised Estimate 1948-49	Budget Estimate 1949-50
Permanent Debt	409.30			
Floating Debt :—				
1. Treasury Bills	Nil		100.00	600.00
2. Other Floati g Loans	10.00	230.00	1,000.00	600.00
3. Loans from Central Govt.	.01	600.00	300.00	Nil
TOTAL	419.31	830.00	1,400.00	1,200.00

Per Capita Money and Real Income in 1938-39 & 1949-50





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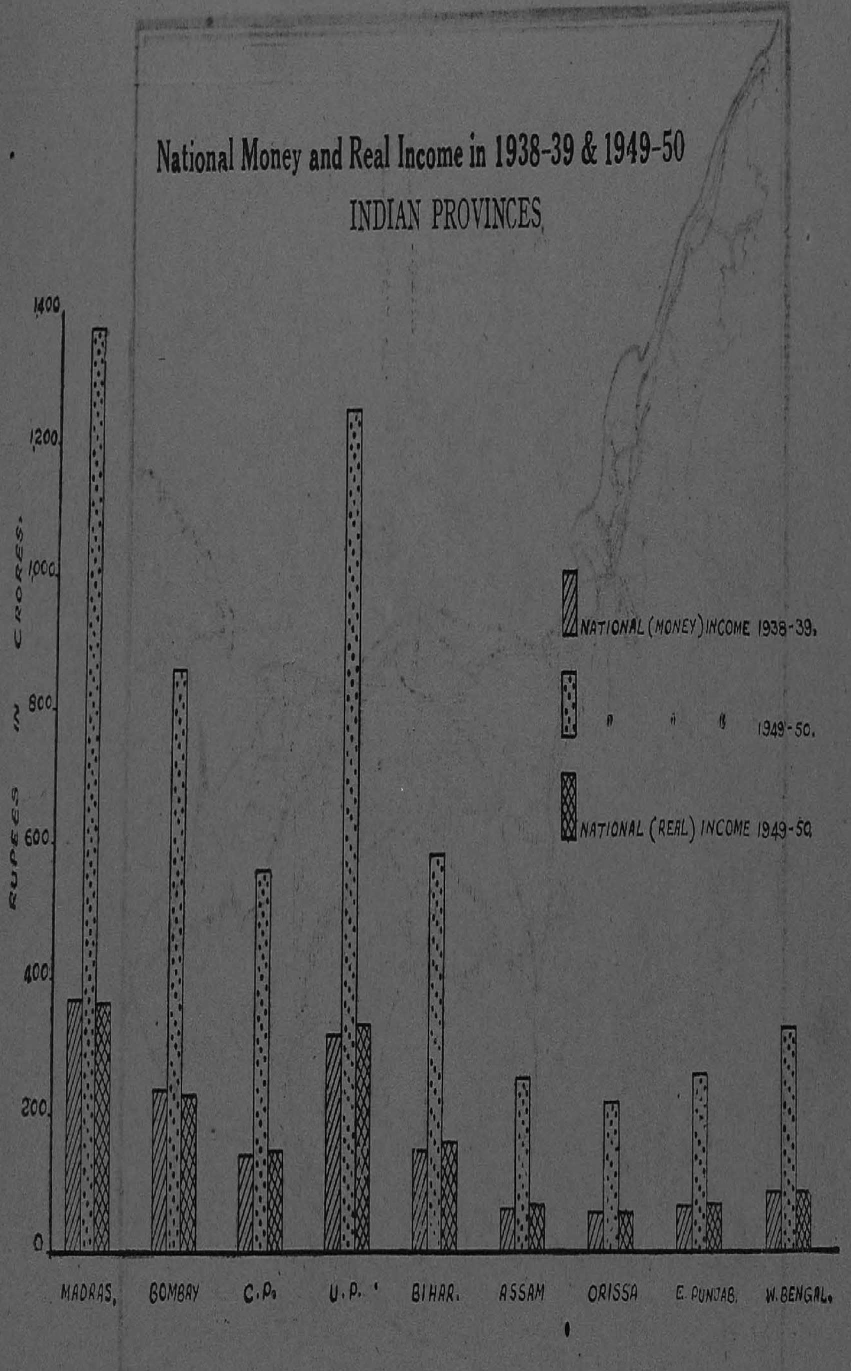

National Money and Real Income in 1938-39 & 1949-50
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NATIONAL (MONEY) INCOME 1938-39.
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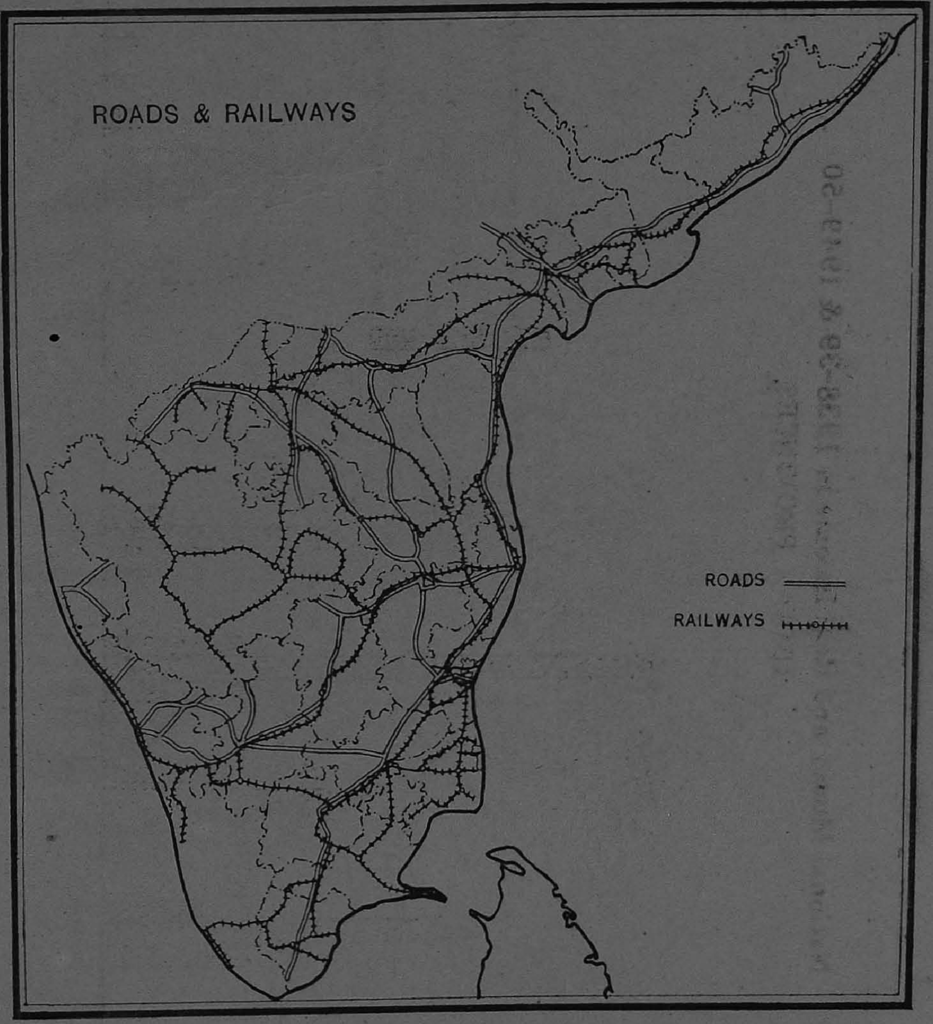
ROADS & RAILWAYS
ROADS
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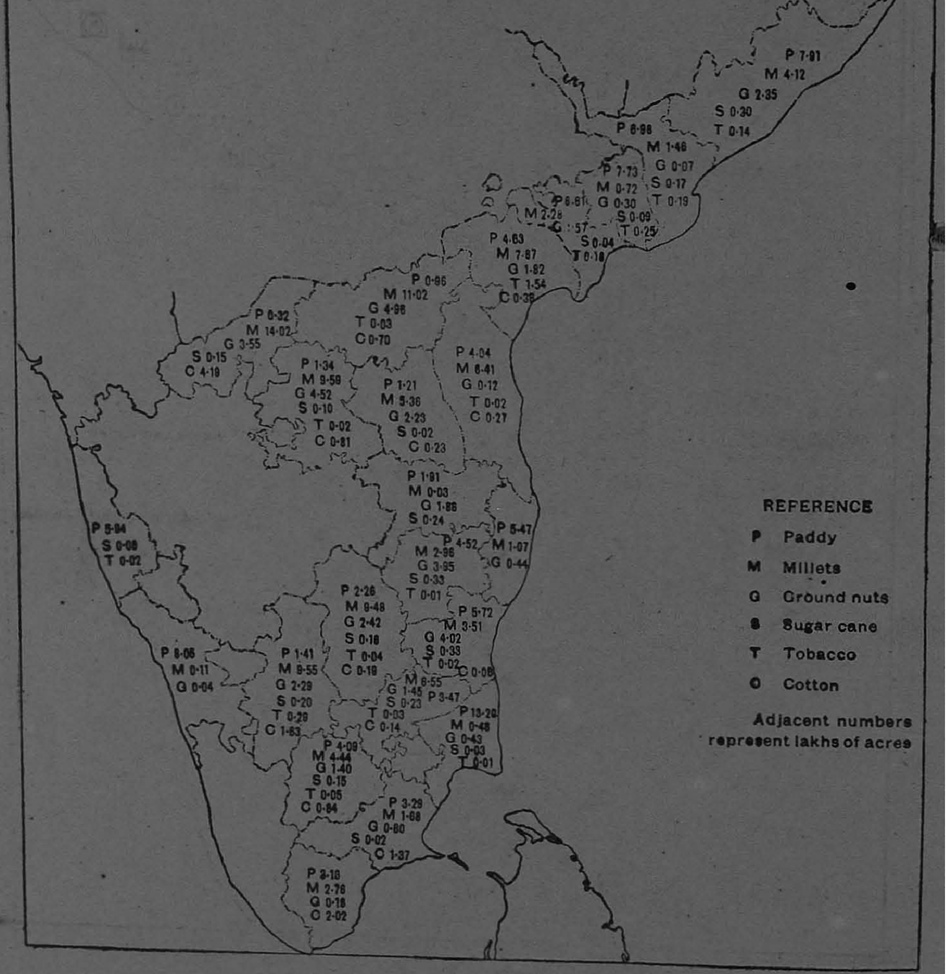
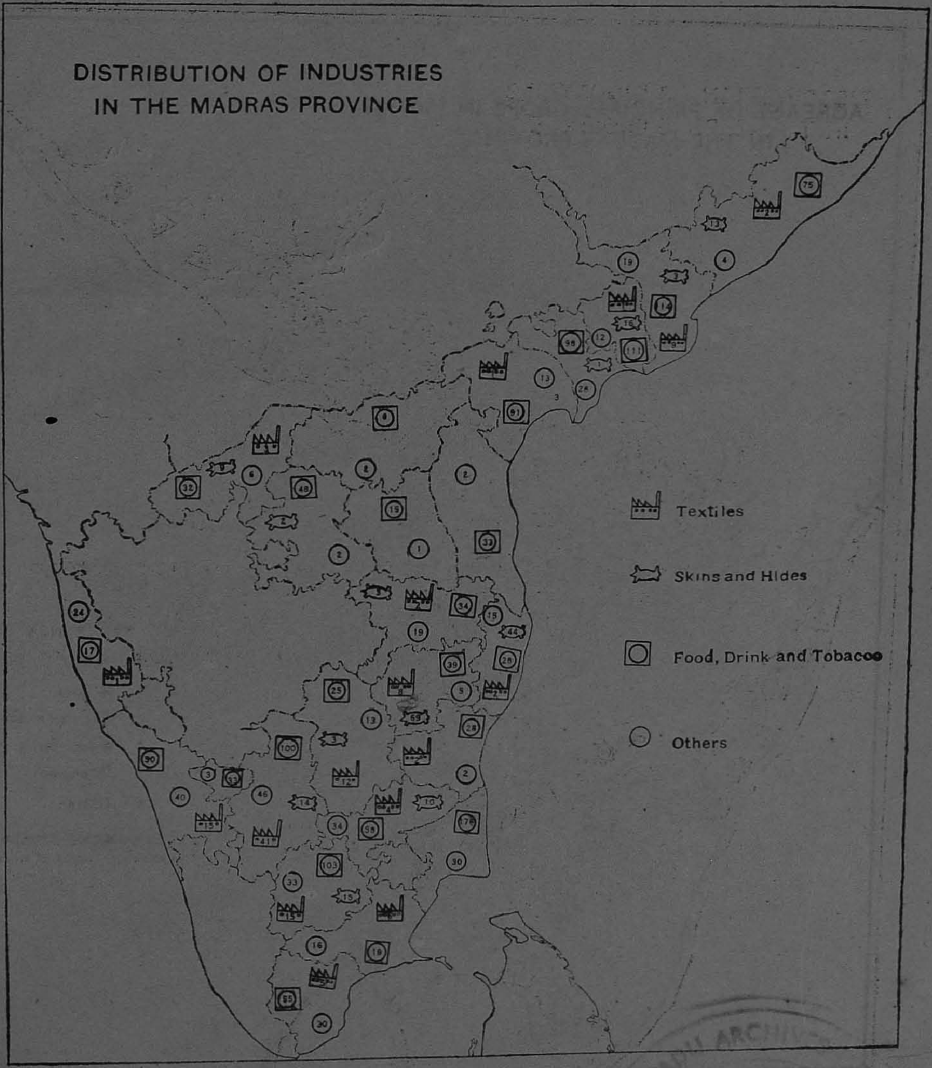
ACREAGE OF PRINCIPAL CROPS IN 1947-48 IN THE MADRAS PROVINCE



DISTRIBUTION OF INDUSTRIES IN THE MADRAS PROVINCE



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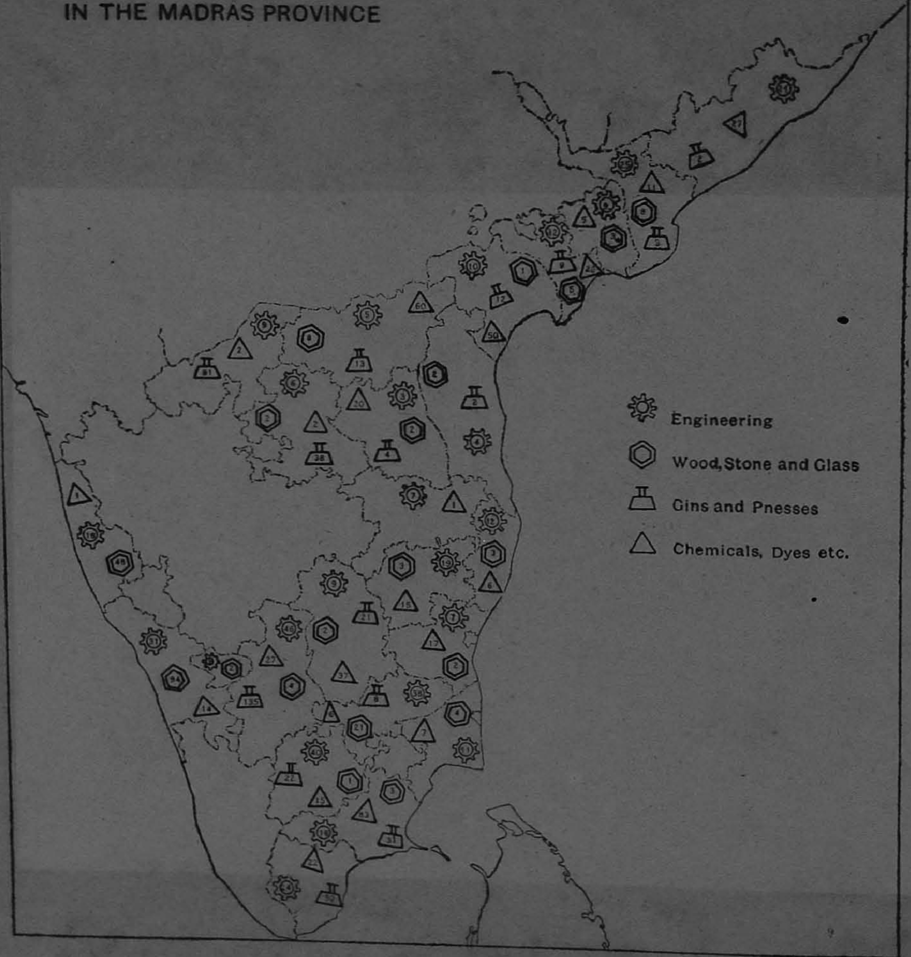
DISTRIBUTION OF INDUSTRIES IN THE MADRAS PROVINCE



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Erratum

Delete

Tanjore 955,958

in line 8 on Page 46.

Add.

Tanjore 955,958

on Page 47, line 5 under cauvery Delta System.